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HELMINTHOLOGICAL ABSTRACTS

incorporating

BIBLIOGRAPHY OF HELMINTHOLOGY

For the Year 1948

COMMONWEALTH BUREAU OF AGRICULTURAL PARASITOLOGY
(HELMINTHOLOGY)

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HELMINTHOLOGICAL ABSTRACTS

Vol. 17, Part 5

1948

PRINCIPAL CONTENTS

GENERAL SUBJECTS

HOST DISTRIBUTION

SYSTEMATICS, NEW SPECIES etc.

GEOGRAPHICAL DISTRIBUTION

HELMINTHOLOGICAL ABSTRACTS

INCORPORATING BIBLIOGRAPHY OF HELMINTHOLOGY
FOR THE YEAR 1948
Vol. 17, Part 5

400—Abstracts of Doctoral Dissertations. University of Nebraska.

a. HANSEN, M. F., 1948.—"Studies on cestodes of rodents." No. 9, pp. 112–119.

(400a) Eight species of cestodes belonging to five genera were collected from 145 rodents in Nebraska. *Schizorchis ochotonae* n.g., n.sp. from *Ochotona princeps figginsi* differs from *Schizotaenia* as the vagina opens ventrally to the cirrus sac opening. The cirrus is unarmed and the cirrus sac elongated. *Schizorchis* differs from *Cittotaenia* in having a single set of reproductive organs, a more medially placed ovary and an unarmed cirrus. *Thomomys bottae bottae* is a new host record for *Schizotaenia anoplocephaloides*. *Andrya microti* n.sp. from *Microtus ochrogaster* has a greater number of ovarian lobes and fewer testes than *A. macrocephala* and *A. translucida*. It has fewer testes, larger excretory vessels and smaller eggs than *A. neotomae*. *Prochoanotaenia peromysci* and *P. spermophili* are transferred to *Choanotaenia*. A new but unnamed species of *Choanotaenia* is described from *Microtus ochrogaster* and from the house mouse and the western fox squirrel. *Hymenolepis citelli* is added to the synonymy of *H. diminuta*. P.M.B.

401—Abstracts of Theses. Alabama Polytechnic Institute Graduate School.

*a. BAILEY, W. S., 1948.—"Observations of the life history of *Cooperia punctata* (v. Linstow, 1907) Ransom, 1907, a nematode parasite of cattle." Years 1945–47, pp. 83–84.

*b. EARLE, H. H., 1948.—"Investigations on the efficacy of tobacco by-products on *Ascaridia galli*, parasite of the chicken, *Gallus gallus*." Years 1945–47, pp. 84–85.

402—Abstracts of Theses. Tulane University.

*a. FULLER, F. W., 1948.—"A comparative study of the efficiency of five diagnostic technics for the demonstration of certain helminth eggs and protozoan cysts." Year 1948, pp. 52–53.

403—Acta Medica Philippina.

a. TUBANGUI, M. & CABRERA, B. D., 1948.—"Studies on filariasis in the Philippines. I. Results of a survey in the province of Sorsogon and in the New Bilibid Prison at Muntinlupa, Rizal." 5 (2), 50–56.

(403a) Of 823 males in the New Bilibid prison at Muntinlupa, Rizal, 37 showed *Microfilaria bancrofti* in the night blood. The positive cases came from Samar, Leyte, Surigao, Oriental Misamis, Davao, Albay, Romblon, Zamboanga, Camarines Sur, Capiz and Bohol. In the Sorsogon Province, where there were a number of cases of hydrocoele, chylocoele, lymph scrotum and elephantiasis of the genital organs and lower limbs, the incidence in Poblacion, Irosin was 14·5% of 277 individuals and 17·9% of 46 persons at Barrio Buraburan, Juban. R.T.L.

404—Acta Medica Turcica.

a. SARIBAŞ, S., 1948.—"Cases of hydatid cysts in the spine." 1 (1), 51–58.

405—Acta Societatis Pediatricae Hellenicae.

*a. AFENTAKI, A. & TZERBIS, M., 1948.—"Hydatid cysts of the sacrum." 2, 117–119.

*b. CATSAS, P. & KONSTANTELLOS, V., 1948.—"Acute purulent peritonitis due to ascariasis." 2, 152–153.

* Titles so marked throughout this number have not been seen in the original.

406—Acta Universitatis Agriculturae et Silviculturae. Brno, RČS. Facultas Agriculturae.

a. BAUDYŠ, E., 1948.—"Sedmý příspěvek k zoocecidiologickému prozkoumání Moravy a Sleska." No. C43, 64 pp. [English summary p. 64.]

(406a) The number of known galls in Moravia and Silesia is increased to 2,800 species. Brief notes are given of the occurrence of *Tylenchus dipsaci* in **Aethusa cynapium*, *Brachypodium pinnatum*, *Brassica oleracea* var. *capitata*, *Dianthus caryophyllus*, *Koeleria pyramidata*, **Lolium multiflorum*, **Medicago falcata*, *Papaver somniferum*, **Phlox amoena*, *Plantago lanceolata*, and of *Tylenchus phalaridis* in *Phleum phleoides*. An unnamed nematode is recorded in *Panicum miliaceum*. [Those starred are not mentioned in Houard's monograph.] R.T.L.

407—Acta Zoologica et Oecologica, Universitatis Lodziensis.

a. PAWŁOWSKI, L. K., 1948.—"Contribution à la systématique des sangsues du genre *Erpobdella* de Blainville." Sectio III, No. 8, 55 pp. [Polish summary pp. 53–54.]

(407a) Pawlowski discusses the systematic relationships of *Erpobdella octoculata*, *E. octoculata* f. *atomaria*, *E. monostriata*, *E. lineata* and *E. testacea*. The distribution of *E. octoculata*, *E. octoculata* f. *atomaria* and *E. monostriata* in Poland and adjoining territories is set out in detail in the text and in three text figures. R.T.L.

408—Actualidad Médica. Granada.

a. LÓPEZ-NEYRA, C. R., 1948.—"Evolución médica en helmintología." Año XXIV, 34 (278), 61–75.

409—Ärztliche Wochenschrift. Berlin.

a. HESSE, E. & GAIDA, M., 1948.—"Zur Diagnose und Therapie der Oxyuriasis." 3 (35/36), 566–567.

410—African Violet Magazine.

*a. WRIGHT, A., 1948.—"Nematodes in African violets." 1 (4), 7–8.

411—Afrique Française Chirurgicale.

a. COIQUAUD, RONDREUX & MONTAGNAC, 1948.—"Deux observations de kyste hydatique du rein.—Néphrectomie.—Guérison." Year 1948, No. 3/4, pp. 77–81.
b. CURTILLET, E., 1948.—"Un progrès important dans la chirurgie du kyste hydatique : les méthodes modernes d'anesthésie générale." Year 1948, No. 7/8, pp. 175–177.

412—Agricultura Técnica. Chile.

a. TAGLE, I., 1948.—"Notas de parasitología." 8 (2), 155–160.

(412a) Tagle describes an outbreak of fatal trichonemiasis in an establishment where 40 out of a total of 180 horses died in the course of two months. The cause of death was considered to be massive infestation with Trichonema larvae, possibly *T. longibursatum*. *Anoplocephala perfoliata* is reported for the first time in Chile, 12 specimens having been found in an 18-year-old mare. Examination of the heart, lung, kidney and intestine of a *Macacus rhesus* which had died in the zoo of Cerro San Cristóbal revealed large numbers of *Cysticercus cellulosae* ; the muscles were also reported to be infected. The parasite had probably been acquired in a circus. E.M.S.

413—Agricultural Chemicals. Baltimore.

a. MILLER, P. R., 1948.—"Plant tests affected by soil parasites." 3 (12), 41, 43, 75–76.

414—Agricultural Extension Circular. Hawaii University.

a. HIERONYMUS, A. M., 1948.—" The life cycle and control of *Haemonchus contortus* (twisted stomach worm) of ruminants." No. 242, 3 pp. [Mimeographed.]

(414a) Hieronymus reports that *Haemonchus contortus* occurs in great numbers in cattle, especially young stock, on damp pastures in Hawaii and refers to the life-cycle of the parasite. Copper sulphate and nicotine drench is recommended because it is considered more effective than phenothiazine. One pound of copper sulphate and 9½ fl. oz. of nicotine sulphate are dissolved in 9½ gal. water. The dosage recommended is: calves 3½–4 fl. oz., yearlings 6 fl. oz. and older animals 12–16 fl. oz. This drench is claimed to be effective against many species of stomach worms and some tapeworms. P.L.leR.

415—Algérie Médicale.

a. AUBRY, PORTIER & CABANNES, 1948.—"Anémie grave par ankylostomose—action remarquable du traitement martial." 51 (2), 103–107.
b. RAYNAUD, R., ZERMATI, M. & CLAUDE, R., 1948.—" Kyste hydatique de la rate et polyglobulie." 51 (3), 178–180. [Discussion p. 180.]

(415a) In Algeria hookworm is an uncommon infection. A case of severe anaemia is reported from the coastal region near Algiers. Rapid improvement followed the administration of 6 gm. of protoxalate of iron daily. After two weeks the haemoglobin index rose from 30% to 60%. After 40 days the patient's condition was completely transformed and his weight had increased by 3 kg. No anthelmintic was given. R.T.L.

416—American Heart Journal.

a. SUÁREZ, R. M., SANTIAGO-STEVENSON, D. & HERNÁNDEZ MORALES, F., 1948.—" Electrocardiographic changes during anthiomaline treatment of schistosomiasis." 36 (6), 923–933.

417—American Journal of Medical Technology.

a. HITCHCOCK, D. J., 1948.—" *Enterobius vermicularis*, human pinworm." 14 (4), 210–213.

(418a) Hitchcock summarizes recent methods of diagnosis of *Enterobius vermicularis*. She tabulates the published results of various authors to show (a) the increase in the number of cases detected by repeated examination of perianal material and (b) the comparative efficiency of the direct faecal film, the brine and zinc sulphate centrifugal-flotation techniques, and the scraper or swab technique. She concludes that at least six examinations by perianal swab should be made. R.T.L.

418—American Journal of Medicine.

a. TILLMAN, A. J. B. & PHILLIPS, H. S., 1948.—" Pulmonary paragonimiasis." 5 (2), 167–187.

(417a) Twelve cases of paragonimiasis were diagnosed among 250 Filipinos under observation for tuberculosis. With one exception the disease was found to be associated with the ingestion of fresh-water shell-fish. Eggs of *Paragonimus westermani* were recovered from the sputum and it was confirmed that four of the patients were also infected with tuberculosis. Although emetine hydrochloride administered intramuscularly relieved the symptoms, there appeared to be no relationship between this relief and the disappearance of the eggs as in seven cases these reappeared within 31 days of treatment. In three cases one course with 0·48–0·54 gm. of emetine was apparently sufficient and in three more a second course appeared to be successful. Observations on the remaining cases were not completed. P.M.B.

419—American Journal of Nursing.

*a. SHOOKHOFF, H. B., 1948.—" Common intestinal parasites." 48 (6), 383–386.

420—American Journal of Roentgenology and Radium Therapy.

a. SCHLANGER, P. M. & SCHLANGER, H., 1948.—" Hydatid disease and its roentgen picture." 60 (3), 331–347.

421—American Journal of Surgery.

a. COLEY, B. L. & LEWIS, B., 1948.—" Filarial funiculitis. Report of a case discovered at operation for inguinal hernia." 76 (1), 15–22.

422—American Professional Pharmacist.

a. ANON., 1948.—" Hetrazan for filariasis bancrofti." 14 (1), 49, 86.

423—Anais do Departamento Estadual de Saúde do Espírito Santo.

a. OLIVEIRA NEVES, A. DE, 1948.—"A esquistosomóse no Estado do Espírito Santo." pp. 37–101.

(423a) Oliveira Neves gives a very detailed account, with numerous maps and tables, of the control work carried out in Espírito Santo against schistosomiasis mansoni. In the years 1935 to 1944, 56,206 faecal samples were examined of which 800 (1·42%) were found to be positive. During the same period, 13,382 liver samples were collected by the National Yellow Fever Service, and of these 361 (2·7%) were positive for *Schistosoma mansoni*. Reasons are given for considering these figures as minimal, and some evidence is produced that the real incidence may be as high as 6–12%. E.M.S.

424—Anais do Instituto de Medicina Tropical. Lisbon.

a. FRAGA DE AZEVEDO, J., ROQUE, R. DE A., COLAÇO, A., CRISTINO, E., RÉS, J. F. & COELHO, M. F., 1948.—"A ancilostomíase rural em Portugal." 5, 31–69. [English & French summaries pp. 67–69.]

b. CRUZ FERREIRA, F. S. & LOPES, M. R., 1948.—"Aspectos clínicos e epidemiológicos dum foco endémico de dracontíase na Guiné Portuguesa." 5, 71–86. [English & French summaries pp. 85–86.]

c. PRATES, M., 1948.—"A bilharziose na África Oriental Portuguesa e a sua importância na etiologia dos carcinomas primitivos do fígado dos indígenas." 5, 149–174. [English & French summaries pp. 170–173.]

d. FRAGA DE AZEVEDO, J., SILVA, J. B. DA, COITO, A. DE M., COELHO, M. F. & COLAÇO, A., 1948.—" O foco português de schistosomíase." 5, 175–222. [English & French summaries pp. 217–220.]

e. CRUZ FERREIRA, F. S. DA, PINTO, A. R. & ALMEIDA, C. L. DE, 1948.—"Alguns dados sobre a biologia do *Anopheles gambiae* da cidade de Bissau e arredores (Guiné Portuguesa), em relação com a transmissão da malária e filaríase linfática." 5, 223–250. [English & French summaries pp. 248–249.]

f. CAYOLLA DA MOTA, L. A. C.-R., 1948.—" Estudo da acção do gamahexano sobre alguns moluscos portugueses dos géneros *Planorbis*, *Limnea* e *Physa*." 5, 289–319. [English & French summaries pp. 300–302, 317–319.]

(424a) In a large area in the suburbs of Coimbra, central Portugal, hookworm is prevalent. At Vilarinho 66·5% of the population is infected. Most of the cases are mild infections. Local conditions favour the development of the eggs throughout the year. The treatment of all patients during the winter season is recommended as a prophylactic measure. R.T.L.

(424b) In Portuguese Guinea, dracontiasis is endemic in the five villages Cassolol, Basseor, Caruai, Tanhate and Sucujaque of the administrative zone of Susana. The average rate of infection of 792 persons examined is 23·5%. In 15% of cases the infections were multiple. The intermediate host is *Mesocyclops leuckarti*. R.T.L.

(424c) From a study in Lourenço Marques of 70 new cases of primary carcinoma of the liver, Prates concludes that the eight histological types of cells previously reported by him were due to insufficient preservation of the material as the only type observed in these new cases was liver cell carcinoma. The genesis of these cancers is attributed to

schistosome infection which affects nearly 100% of the population. Cattle heavily infected with *Schistosoma bovis* showed hepatitis, cirrhosis and cancers identical with those seen in the human cases. R.T.L.

(424d) At the present time schistosomiasis haematobia in the province of Algarve in southern Portugal is restricted to the village of Estoi. The intermediate host *Planorbis dufourii* is widely distributed throughout Algarve ; 80·9% of specimens submitted to experimental infection became infected. *Cercopithecus aethiops sabaeus*, infected through the skin, showed hepatic and intestinal lesions only ; eggs were never found in the urine. Eradication of the disease must depend on the detection and treatment of infected persons, as the wide distribution of *P. dufourii* renders mollusc eradication impracticable. R.T.L

(424e) In Portuguese Guinea, in Bissau and its suburbs, dissections of 988 *Anopheles gambiae* gave an infection rate of 2·4% with the larvae of *Wuchereria bancrofti* ; larvae occurred in the proboscis in 0·51%. The incidence of microfilariae in 709 children under 12 years of age was 0·42%. R.T.L.

(424f) Gammexane killed 100% of *Planorbis dufourii, Limnaea pereger* and *Physa acuta* in 24 hours at concentrations of 100 p.p.m. or greater, as compared with 1 p.p.m. of copper sulphate. Although gammexane emulsion effectively retarded the development of the embryos of *P. dufourii*, the very high concentrations required to kill these embryos renders its use in the field impracticable. R.T.L.

425—Anais Paulistas de Medicina e Cirurgia.

a. MONTENEGRO, C., RUI, P. & MILLAN, R., 1948.—" Pancreatite aguda consequente à obstrução do canal de Wirsung, por ascaris." 56 (2), 112–114.
b. ALBUQUERQUE PRADO, P. DE, 1948.—" Tratamento local da oxiuróse." 56 (4), 251–259.

(425b) Success in 20 cases of enterobiasis is claimed from the local application of a commercial preparation "Locoxiurol" containing oil of chenopodium, gentian violet, extract of belladonna, menthol and camphor. It is said also to have analgesic, antipruritic and antiseptic properties. R.T.L.

426—Anales de Cirugía. Rosario.

a. CAMES, O. J., CID, J. M. & ALVAREZ, A., 1948.—" Parasitosis errática peritoneal por *Fasciola hepática*." 13, 1–8.

427—Anales de la Escuela Nacional de Ciencias Biológicas. Mexico.

a. CABALLERO y C., E., 1948.—" Estudios helmintológicos de la cuenca del río Papaloapan. III. Strigeidos de los lagartos de México. 2." 5 (3/4), 217–221. [English summary pp. 220–221.]
b. CABALLERO y C., E. & FLORES B., L., 1948.—" Parasitismo de *Streptoceryle torquata torquata* por *Cathaemasia retic lata* (Wright, 1879) Harwood, 1936 (Trematoda : Echinostomatidae)." 5 (3/4), 223–227. [English summary p. 226.]

(427a) The strigeid *Crocodilicola pseudostoma*, now reported from the intestine of *Crocodylus morelettii* at Río Cuetzalapan, Catemaco, Vera Cruz, is figured and redescribed. R.T.L.

(427b) *Cathaemasia reticulata* were collected from *Streptoceryle torquata torquata* at Antiguo Morelos, Tamaulipas, Mexico. The specimens now described and figured are larger than those originally named by Harwood and by Zeliff. *Pulchrosoma pulchrosoma* Travassos is now considered to be a synonym of *C. reticulata*. R.T.L.

428—Anales de la Facultad de Medicina. Lima.

a. CHIRIBOGA, J., 1948.—" Contribución al estudio de las anemias en el trópico." 31 (3), 271–309.

429—Anales de la Facultad de Medicina de Montevideo.

a. CENDÁN ALFONZO, J. E., 1948.—" Relaciones de la hidatidosis hepática con la litiasis biliar. Litiasis hidática. Litiasis parahidática. Litiasis biliar común." 33 (8/10), 879–956.

430—Anales del Instituto de Higiene de Montevideo.

a. LÓPEZ-FERNÁNDEZ, J. R., 1948.—" El diagnostico de la oxiurosis en el laboratorio. Frecuencia de la oxiurosis infantil en nuestro medio." 2 (1), 85–91.
b. MACKINNON, J. E., 1948.—" Tercer caso de distomatosis hepática en el Uruguay." 2 (1), 115–116.
c. MACKINNON, J. E., 1948.—" Expulsión de *Taenia saginata* por la boca." 2 (1), 117–118.

(430a) Examination by NIH swab of 100 Uruguayan children between nine and twelve years of age, and 300 between one and six years of age, revealed as positive for enterobiasis 38% and 21% respectively. R.T.L.

431—Anales de Medicina. Barcelona.

a. SOLÉ SAGARRA, J., 1948.—" Cisticercosis cerebral con sintomatología predominante oftalmológica." 35 (408), 452–455.

432—Ankara Yüksek Ziraat Enstitüsü Dergisi.

*a. OYTUN, H. S., 1948.—[Researches with phenothiazine against intestinal nematodes of sheep.] 9 (18), 483–495. [In Turkish.]

433—Annales Medicinae Experimentalis et Biologiae Fenniae. Helsinki.

a. HUHTALA, A., 1948.—" Vergleichende pharmakologische und chemische Untersuchungen über Farnextrakte." 26, Suppl. 5, 299 pp.

434—Annales d'Oculistique.

a. PACHECO-LUNA, R., 1948.—" L'onchocercose du Guatémala." 181 (8), 463–467.

(434a) Onchocerciasis is considered to have been introduced into Guatemala by African slaves and is now present in a clearly defined region between altitudes of 400 and 1,600 metres on the Pacific slopes of the Sierra Madre, a fertile coffee-growing area. The Onchocerca nodules always appear on the head ; the vectors are day-biting *Simulium ochraceum, S. metallicum* and *S. callidum.* P.M.B.

435—Annales de Parasitologie Humaine et Comparée.

a. DOLLFUS, R. P., 1948.—" Sur deux monostomes (Cyclocoelidae) pourvus d'une ventouse ventrale. Observations sur la classification des Cyclocoeloidea Albert Henry 1923, liste de leurs hôtes, répartition géographique." 23 (3/4), 129–199.
b. RIOUX, J. & QUÉZEL, P., 1948.—" Remarques sur le xénotropisme de la cercaire d'*Opisthioglyphe ranae* (Frölich, 1791 ; Looss, 1907)." 23 (3/4), 200–202.
c. GALLIARD, H., 1948.—" Infestation expérimentale par les larves plérocercoides de *Diphyllobothrium mansoni* au Tonkin." 23 (3/4), 203–213.

(435a) In a revised classification of the Cyclocoeloidea, Dollfus adopts the main divisions proposed by Harrah but raises two of the three subfamilies to family rank and incorporates part of the third subfamily into a third family. Dollfus divides the Cyclocoeliidae into (a) Cyclocoelinae for *Allopyge* and *Cyclocoelum* (with its subgenera *Cyclocoelum* and *Pseudhyptiasmus*) ; (b) Hyptiasminae for *Hyptiasmus* (with its subgenera *Hyptiasmus* and *Transcoelum*), *Stossichium* and *Prohyptiasmus* ; (c) Haematotrephinae for *Wardianum, Corpopirum* and *Haematotrephus* (with its subgenera *Haematotrephus* and *Uvitellina*). The Bothrigastridae contains (a) Bothrigastrinae (nom.nov) for *Bothrigaster* (nom.nov. for *Bothriogaster* preoccupied) and *Spaniometra* ; (b) Ophthalmophaginae for *Contracoelum* and *Ophthalmophagus* (with its subgenera *Ophthalmophagus* and *Geowitenbergia* n.subg.). The Typhlocoelidae contains Typhlocoelinae for *Typhlophilus* and *Typhlocoelum* (with its subgenera *Typhlocoelum* and *Tracheophilus*). The relevant species are allocated to each genus and a differential diagnosis for each family, subfamily, genus and subgenus

is given. There are descriptions of *Cyclocoelum* (*Cyclocoelum*) *theophili* n.sp. from *Phoenicopterus ruber*, and *Hyptiasmus* (*Hyptiasmus*) *brumpti* n.sp. from *Gallinula chloropus*. Both have an acetabulum, a rare occurrence in the Cyclocoeloidea. Hosts and geographical distributions are tabulated, with notes and commentaries. The genera and subgenera, whether valid or not, numbering 38, including those in the present monograph, are listed alphabetically. There is a very extensive bibliography. R.T.L.

(435b) Although the cercariae of *Opisthioglyphe ranae* normally encyst in the larvae of batrachians and adventitiously in molluscs and fishes, this specificity is not as rigid as has been supposed. It is possible experimentally to enable new intermediate hosts to be invaded. Most authors do not admit that these cercariae encyst in arthropods or worms. When large numbers of these cercariae are brought into contact with *Tubifex tubifex*, attempts at penetration are quickly stopped by the violent reactions of the worm, but if the worm if fixed to a small board with fine needles, typical cysts can be found on dissection four hours later in the region of the clitellum. In the same way, penetration and encystment can be assisted in *Chironomus* and *Agrio* larvae which normally are resistant. R.T.L.

(435c) *Rana tigrina*, *R. limnocharis*, *Hypsirhina enhydris*, rats, guinea-pigs and rabbits, are easily infected experimentally with plerocercoids of *Diphyllobothrium mansoni* provided a sufficient number of larvae are used. In the amphibians and reptiles there is no inflammatory reaction but in the mammalian hosts there are frequently ulceration, perforation and haemorrhage and the spargana cause peritoneal, pleural and pericardial adhesions. The rat is the most susceptible. Dogs and cats were easily infected experimentally. R.T.L.

436—Annales des Sciences Naturelles. Zoologie et Biologie Animale.

a. HURLAUX, R., 1948.—" Recherches sur les cellules dites phagocytaires de l'ascaride du cheval (*Parascaris equorum* Goeze)." 11e Serie, Year 1947, 9 (2), 155–226.

(436a) Hurlaux describes the "phagocytic cells" of *Parascaris equorum* as giant cells whose surface is enormously enlarged by the "cytoplasmic pearls" which cover them. Cytochemical study of these cells has shown that they are essentially very rich in oxidases. The peri-enteric fluid of Parascaris contains a haemoglobin almost or completely identical with that of its host, the horse. The hypothesis is put forward that the giant cells are neither phagocytes nor athrocytes, but function as respiratory centres for the utilization of the exogenous haemoglobin. The parasite should not be considered as a strict anaerobe, but as employing some metabolic aerobic processes through the intermediary of its giant cells, which should be called "oxidase cells". E.M.S.

437—Annales de la Société Belge de Médecine Tropicale.

a. JANSSEN, P., 1948.—" La bilharziose intestinale dans la région de Tora (province orientale du Congo belge)." 28 (4), 395–410.

(437a) Over 85% of the indigenous adult population of the gold mines and 75% of the children of Tora, in the eastern province of the Belgian Congo, are infected with *Schistosoma mansoni*. In this region bilharziasis is predominantly hepatic, not intestinal. The bromosulphalein test proved valueless in such cases. R.T.L.

438—Annales Universitatis Mariae Curie-Skłodowska. Lublin.

a. KARPIŃSKI, J. J. & KAMIŃSKA, L., 1948.—" Przyczynek do ekologii *Trichinella spiralis* Oven [Owen] i innych endopasożytów drobnych ssaków Białowieskiego Parku Narodowego." Sectio C, 3 (15), 427–437. [In Polish: French summary pp. 435–437.]

(438a) The authors have carried out a systematic bio-ecological study of the mammalian fauna in the National Park Forest of Bialowieza. The area under study was divided according to the dominant type of forest trees. They examined 264 *Sorex minutus*, 890 *S. araneus*, 24 *S. macropygmaeus pleskei*, 28 *Neomys fodiens*, 10 *Talpa europea*, 110 *Microtus*

agrestis, 23 *Micromys minutus*, 257 *Evotomys glareolus*, 125 *Pitymys subterraneus*, 70 *Sicista subtilis*, 37 *Apodemus flavicollis*, 6 *Dyromys nitedula* and one *Arvicola terrestris*. Tables illustrate the incidence of trematodes, nematodes and acanthocephalans in the animals trapped in the different areas. Out of 1,845 animals examined, 126 were infected. This paper deals only with the infection of *Trichinella spiralis* which was recorded from *Talpa europea* and, for the first time, from *Sorex araneus*, *S. minutus*, *N. fodiens* and *M. minutus*. C.R.

439—Annali d'Igiene.

a. BOSCARDI, F. & PETRILLO, E., 1948.—"Atossicità del dicloro-difenil-tricloroetano (D.D.T.) per le larve dei trematodi e per i molluschi ospiti intermedi." 58 (1), 41–42.

(439a) Boscardi & Petrillo report no observable effect when living cercariae of *Fasciola hepatica* and *Echinostoma revolutum* were immersed in aqueous dispersions of D.D.T. of mean particle diameter 5μ, and at concentrations up to 1%. Similar dispersions were also without effect on *Limnaea truncatula*, *L. pereger*, *L. stagnalis*, and on the marine *Trochus articulatus*, although the D.D.T. became deposited on the aquarium walls and on vegetation serving as food for the molluscs. B.G.P.

440—Annali di Medicina Navale e Coloniale.

a. NARDONE, P. M., 1948.—"La distomiasi sinense. Contributo allo studio delle sindromi da *Clonorchis sinensis* nell'estuario dello Yangtzekiang e nella zona di Shanghai. (Cura chirugica con fistola biliare terapeutica)." 53 (1), 59–78.

(440a) The incidence of *Clonorchis sinensis* is considered to be much higher in Central China, Shanghai and the valley of the Yangtse than published figures show. It probably affects 40% of the Chinese population of Shanghai in addition to many Europeans. The disease is very prevalent in southern China. Endemic foci also exist in the north and in Manchukuo. The molluscan vector is *Bithynia striatula*, *B. sinensis* or *B. longicornis*. In mild cases satisfactory results have been achieved at a Shanghai hospital by a course of 10 injections with 5 c.c. of fouadin on alternate days followed immediately by a 20-day course of gentian violet capsules amounting to a total of 3·04 gm. After ten days' rest both courses were repeated. In more severe cases, surgical drainage of the bile ducts was also necessary and gave satisfactory results in the 12 cases treated. P.M.B.

441—Annals of Internal Medicine.

a. KYLE, L. H., McKAY, D. G. & SPARLING, Jr., H. J., 1948.—"Strongyloidiasis." 29 (6), 1014–1042.

(441a) The possibility of persistence of infection, through the mechanism of hyper-infection, for years after primary infection is illustrated by a case of strongyloidiasis in which severe symptoms, with fatal termination, developed many years after departure from the tropics. At autopsy filariform larvae were found in the myocardium, lungs, liver and gall-bladder as well as in the usual situations. R.T.L.

442—Annals and Magazine of Natural History.

a. BAYLIS, H. A., 1948.—"A new acanthocephalan from an East African freshwater fish." Year 1947, Ser. XI, 14 (120), 861–868.
b. BAYLIS, H. A., 1948.—"On the synonymy of two tetraphyllidean cestodes from rays." Year 1947, Ser. XII, 1 (4), 293–295.

(442a) *Acanthosentis tilapiae* n.sp. from the intestine of *Tilapia lidole* in Lake Nyasa is described and illustrated. The four known species of *Acanthosentis* had been found in Indian fresh-water fishes. As in *A. holospinus* and *A. dattai* spines occur throughout the body in *A. tilapiae*, whereas in *A. antespinus* and *A. sircari* they are restricted to the anterior half. *A. dattai* is considered to be a synonym of *A. holospinus*. The systematic position of

Acanthosentis is discussed. Baylis prefers the simpler classification of the Acanthocephala proposed by Travassos (1926) to that of Van Cleave (1936). R.T.L.

(442b) *Echeneibothrium maculatum* Woodland, 1927, which occurs abundantly in the spotted ray (*Raja montagui*) in the English Channel, is considered to be a synonym of *E. dubium* v. Beneden, 1858, and *E. julievansium* Woodland, 1927 to be a synonym of *Tritaphros retzii* Lönnberg, 1889. The other cestodes recorded by Baylis from *R. montagui* are *E.* (*Discobothrium*) *fallax*, *Acanthobothrium dujardinii* and *Onchobothrium pseudo-uncinatum*. R.T.L.

443—Annals of Western Medicine and Surgery.

a. WOOD, F. D., 1948.—"A critical review of pinworm infection." 2 (8), 347–357.

444—Antiseptic. Madras.

a. VENKATESWARAN, C. H., 1948.—" Hydatid cyst of the liver. Cholecystectomy and marsupialisation." 45 (6), 415.
b. DHRUVA, C. T., 1948.—"A case of tetanoid spasms from worms." 45 (6), 416.
c. FRIEDMANN, M., 1948.—" *Thelazia callipaeda*, the 'oriental eye worm'." 45 (9), 620–626.
d. PATRO, B. C., 1948.—"A case of round worms." 45 (10), 718.

(444c) Four specimens of *Thelazia callipaeda* were removed from the eye of a 15-months-old Indian child. A personal communication from a former prisoner-of-war affirms that eye worms were frequently met with at the Kuching Camp, Sarawak, Borneo. Among 52 inmates 11 were infected. The prisoners removed the parasites with tweezers. R.T.L.

445—Archives de Biologie. Liége & Paris.

a. PASTEELS, J., 1948.—" Recherches sur le cycle germinal chez l'Ascaris. Etude cytochimique des acides nucléiques dans l'oögénèse, la spermatogénèse et le développement chez *Parascaris equorum* Goeze." 59 (4), 405–446.

446—Archives of Dermatology and Syphilology.

a. KESTEN, B. M., 1948.—" Larva migrans." 57 (4), 766.

447—Archives de l'Institut Pasteur de la Martinique.

a. PONCE PINEDO, A. M., 1948.—" La bilharziose à *S. mansoni* dans la République Dominicaine." 1 (1), 12–16.
b. JULLIEN-VIEROZ, R., CAUBET, P. & MONTESTRUC, E., 1948.—" Contribution à l'étude des splénomégalies à *Schistosomum mansoni*." 1 (3), 3–14.

(447a) Ponce Pinedo records six cases of *Schistosoma mansoni* infection acquired in the neighbourhood of Hato Mayor in the Dominican Republic. Of *Australorbis glabratus* collected from the streams Pane-Pane and Las Guamas, 5% [3% in summary] were naturally infected. Rabbits were experimentally infected and adult *S. mansoni* were obtained 40–60 days later. R.T.L.

(447b) A study of four cases of splenomegaly in Martinique showed that the principal lesions caused by *Schistosoma mansoni* were atrophy of the lymphoid follicles, with disappearance of their germinal centres, and a reticular hyperplasia of the red pulp cords which tended to obliterate the sinuses. R.T.L.

448—Archives des Maladies de l'Appareil Digestif et des Maladies de la Nutrition.

a. MASSIAS, C. & NGUYEN DINH HAO, 1948.—"Ascaridiose pancréatique." 37 (7/8), 531.

449—Archives of Neurology and Psychiatry. Chicago.

a. OBRADOR, S., 1948.—" Clinical aspects of cerebral cysticercosis." 59 (4), 457–468.

450—Archives of Pediatrics.

a. KAHN, 1948.—"Measles; drug sensitivity; trichinosis; virus pneumonia." 65 (8), 454–459.

451—Archives Portugaises des Sciences Biologiques.

a. TOSCANO RICO, J. & ARMIJO Y VALENZUELA, M. DE, 1948.—"Action de quelques phénols et éthers phénoliques sur l'*Ascaris suum*." 9 (2/3), 170–175.

(451a) Pyrocatechol, resorcinol, hydroquinone and phloroglucinol at 0·02 molar concentrations have little activity against *Ascaris suum*. Etherification of phenolic groups results in the formation of products which are much more active than the original phenols. The dimethyl ethers of pyrocatechol and resorcinol are more active than the corresponding monoethers. Substitution of a methyl group by an ethyl group in ethers of pyrocatechol and resorcinol results in the formation of more active products if the solubility in water is not too greatly reduced. Monomethyl ether of resorcinol is more active than orcinol. Dimethyl ether of phloroglucinol is very active against *A. suum*. P.M.B.

452—Archivos de la Asociación para Evitar la Ceguera en México.

a. PUIG SOLANES, M., 1948.—"Nuevos datos estadísticos acerca de las alteraciones oculares oncocercosas." 6, 265–293. [English summary p. 293. Discussion pp. 293–295.]

(452a) [This paper has also appeared in *An. Soc. mex. Oftal.*, 1947, 21 (4), 264–297. For abstract see Helm. Abs., 16, No. 392d.]

453—Archivos Españoles de Urología.

a. MARTÍNEZ RODÓ, P., 1948.—"Quiste hidatídico de riñón." 4 (3), 239–241.

454—Archivos Internacionales de la Hidatidosis. Montevideo.

a. PRAT, D., 1948.—"Comunicación al 1.er Congreso Internacional de la Hidatidosis, organizado por el Centro de Estudio y Profilaxis de la Hidatidosis del Uruguay." Year 1947, 7 (1/2), 11–14.
b. PRAT, D., 1948.—"Complicaciones y secuelas del quiste hidático. Es la hidatidosis una afección benigna como se le ha considerado hasta hace poco?" Year 1947, 7 (1/2), 15–26.
c. BLANCO ACEVEDO, E. & MORADOR, J. L., 1948.—"Los quistes hidáticos de la logia esplénica." Year 1947, 7 (1/2), 29–101.
d. MENEGHETTI, M. D., 1948.—"Aspecto actual da profilaxia contra a hidatidose no Río Grande do Sul." Year 1947, 7 (1/2), 103–110.
e. MENEGHETTI, M. D., 1948.—"Primeiros ensaios do tratamento biológico da hidatidose no Brasil." Year 1947, 7 (1/2), 111–119.
f. CRIVELLARI, C. A. & CABELLA, M. P., 1948.—"El tiempo de internación en hospitales de 100 enfermos de hidatidosis tomados al azar del fichero de la sección." Year 1947, 7 (1/2), 121–123.
g. CRIVELLARI, C. A. & CABELLA, M. P., 1948.—"Plan de lucha contra la hidatidosis en la República Argentina." Year 1947, 7 (1/2), 125–130.
h. LÓPEZ-NEYRA, C. R., 1948.—"Bibliografía equinococósica Ibérica." Year 1947, 7 (1/2), 131–174.
i. LA BARRERA, J. M. DE, 1948.—"*Echinococcus granulosus* en *Microcavia australis*." Year 1947, 7 (1/2), 175–176.
j. CALLERI, E. M., 1948.—"El quiste hidático en el Hospital Durazno." Year 1947, 7 (1/2), 177–183.
k. SCHROEDER, A., 1948.—"Diagnóstico de quiste hidático cerebral." Year 1947, 7 (1/2), 195–218.
l. DAVIS, H. J., 1948.—"Hydatid disease or echinococciasis caused by *Echinococcus granulosus*: with special reference to Uruguay." Year 1947, 7 (1/2), 219–230.
m. CAUBARRÈRE, N. L., 1948.—"Hidatidosis de la pelvis." Year 1947, 7 (1/2), 231–242.
n. ARANA IÑIGUEZ, R., GARCÍA CAPURRO, R. & CAUBARRÈRE, N. L., 1948.—"Hidatidosis vertebral. A propósito de un caso diagnosticado precozmente." Year 1947, 7 (1/2), 243–255.
o. BONABA, J., PÉREZ FONTANA, V. & SOTO, J. A., 1948.—"Neumoquiste perivesicular con tensión positiva. Comprobación operatoria. Primera observación de la literatura." Year 1947, 7 (1/2), 257–265. [English summary pp. 264–265.]
p. PÉREZ FONTANA, V., 1948.—"Nuevo método de operar en el quiste hidático del pulmón." Year 1947, 7 (1/2), 267–300. [English summary p. 300.]
q. DÉVÉ, F., 1948.—"Unité ou pluralité du parasite echinococcique." Year 1947, 7 (1/2), 303–306.
r. DÉVÉ, F., 1948.—"L'échinococcose osseuse expérimentale." Year 1947, 7 (1/2), 307–346.

s. VANNI, V., 1948.—"Osservazioni sulla funzione degli uncini dell'embrione dei cestodi." Year 1947, **7** (1/2), 347–351. [English, French & German summaries p. 350.]
t. PÉREZ FONTANA, V., 1948.—"Equinococosis ósea experimental. (Correlación anatomo-radiológica)." Year 1947, **7** (1/2), 353–401.

(454d) The State of Rio Grande do Sul, Brazil, is one of the principal foci of human hydatidosis. The disease is considered to be on the increase, and by the end of 1946, 602 cases had been reported. Contributing factors are the high incidence in livestock, the excessive number of stray dogs, and the lack of knowledge among country people. A table is given showing the incidence, by municipality, of hydatid cysts in cattle, pigs and sheep slaughtered in the State in 1946; the total incidence was 7·63% of 159,469 cattle, 13·11% of 64,282 pigs and 29·53% of 55,861 sheep. In Porto Alegre, the capital, the incidence in sheep was 69·38%. The refrigeration plant at Pelotas reported an incidence during 1946 of 29·98% of 51,327 cattle, 51·4% of 48,852 sheep, and 9·47% of 32,472 pigs. Control measures are discussed. E.M.S.

(454i) Larval stages of *Echinococcus*, indistinguishable from those of *E. granulosus*, were found in four out of 104 specimens examined of *Microcavia australis*. This rodent is widely distributed in the forests throughout central and western Argentina. The specimens examined were all caught near a small food market where about ten or a dozen sheep were slaughtered for food each week, the viscera being left available to the dogs and cats. Five of eight dogs examined carried the adult parasite, and 2–3% of the sheep harboured the cysts. E.M.S.

(454 l) During the ten-year period 1935 through 1944, 3,780 persons were admitted to hospital with hydatid disease in Uruguay. The annual incidence constituted between 2·7 and 4·08 per 1,000 hospital cases. Liver hydatids accounted for 53·2%, and those in the lungs for 28% of the total. The incidence was greatest between the ages of 5 and 40 years. A table gives the geographical distribution of the cases by departments, and shows 2,387 cases in the Department of Montevideo. The mortality in Uruguay does not exceed 15%. A general account of the disease is given. E.M.S.

(454s) [This paper is reprinted from *Riv. Parassit.*, 1938, **2** (2), 91–94. For abstract see Helm. Abs., **7**, No. 138a.]

455—Archivos de Pediatría del Uruguay.

a. PÉREZ FONTANA, V., 1948.—"Nuevo método de operar en el quiste hidático del pulmón." **19** (1), 5–37; (6), 360. [English summary p. 37.]

456—Archivos Peruanos de Patologia y Clínica.

a. CORNEJO DONAYRE, A., GONZÁLES, D. & DIEGUEZ, J., 1948.—"Survey sobre parasitismo intestinal en el personal técnico, administrativo y auxiliar de los hospitales de Iquitos." **2** (1), 123–130.
b. CORNEJO DONAYRE, A., ATKINS, J. & ZAVALETA, A., 1948.—"Presencia del *Necator americanus* en la selva peruana." **2** (1), 131–133.
c. URTEAGA BALLÓN, O., ZAVALETA R., A. & DIEGUEZ N., J., 1948.—"Algunas observaciones en la patologia del parasitismo intestinal." **2** (2), 215–263.

457—Archivos de la Secretaria de Salud Publica de la Nación. Buenos Aires.

a. ANON., 1948.—"Realizóse en Azul el Segundo Congreso Internacional de Hidatidosis." **3** (18), 66–77.

458—Archivos de la Sociedad de Biología de Montevideo.

a. VANNI, V., 1948.—"Sobre algunas metaplasias producidas por helmintos." Year 1947, **14** (1/4), 11–13.

(458a) Vanni found *Capillaria hepatica* in 80% of 28 *Rattus norvegicus* and five *Mus musculus* captured in the Roman Campagna and in the suburbs of the city, and

Trichosomoides crassicauda in all of 19 *Arvicola arvalis*. *T. crassicauda* females were found attached to the wall of the urinary bladder, the mucosa showing a hyperplasia of metaplastic type which formed a pronounced ring of corneal epithelium surrounding the head of each worm: the relationship was entirely superficial with no trace of inflammatory reaction. A photomicrograph is shown of this, and of the analogous reaction produced in the oesophageal mucosa of sheep infected with *Gongylonema pulchrum*, with keratinization of the mucosa along the length of the uterus of the embedded worm. A third photomicrograph is of the liver of a rat infected with *Capillaria hepatica*, the organ being reduced to a net of fibrous connective tissue full of the eggs of the parasite. E.M.S.

459—Archivos de la Sociedad de Cirujanos de Hospital. Santiago de Chile.

a. NORAMBUENA, C., 1948.—"Hidatidosis ósea." Número Extraordinario, pp. 304–306.
b. YÓDICE, A. & LE CHIARE, F., 1948.—"Tratamiento quirúrgico de los quistes hidatídicos del pulmón." Número Extraordinario, pp. 316–318.
c. MICHAEL A., J. & BERGENFREID, A., 1948.—"Quiste hidatídico del pulmón y su cirugía." Número Extraordinario, pp. 354–357.
d. WILHELM G., O., 1948.—"La equinococosis en Chile." Número Extraordinario, pp. 385–387.

460—Archivos Uruguayos de Medicina, Cirugía y Especialidades.

a. ARMAND UGÓN, C. V., 1948.—"Tecnica de la extirpación del quiste hidático del pulmón." 32 (3), 147–154. [Discussion pp. 154–163.]
b. CAMPO, J. C. DEL & LASNIER, E. P., 1948.—"Equinococosis pulmonar. Retención seca de membrana. Lobectomía parcial." 32 (5), 412–440.
c. ARMAND UGÓN, C. V., VICTORICA, A. & SUÁREZ, H., 1948.—"Neumonectomía por hidatidosis pleuro-pulmonar masiva." 32 (6), 480–490. [Discussion pp. 491–493.]
d. LARGHERO, P. & FERREIRA BERRUTI, P., 1948.—"Pioneumoquiste y pioneumotórax hidático sofocante." 33 (1/2), 80–84.

461—Arquivos da Faculdade de Higiene e Saúde Pública da Universidade de São Paulo.

a. MEIRA, J. A. & SOARES JUNIOR, J. C. M., 1948.—"A biópsia retal no diagnóstico da esquistosomíase mansoni." 2 (1), 45–90. [English summary pp. 83–84.]

(461a) Rectal biopsies on 42 patients with schistosomiasis mansoni were positive in 17 and negative in 25. In none of the cases negative to biopsy were the faeces positive. R.T.L.

462—Arquivos do Instituto de Biologia do Exército. Rio de Janeiro.

a. MOLLER MEIRELLES, M., 1948.—"A profilaxia das helmintíases no exército." 9 (9), 18–29. [English summary p. 28.]
b. MOLLER MEIRELLES, M., 1948.—"Contribuição ao conhecimento da incidência das verminoses no Distrito Federal." 9 (9), 30–34. [English summary p. 34.]

463—Arquivos de Neuro-Psiquiatria. São Paulo.

a. LAMARTINE DE ASSIS, J. & TENUTO, R. A., 1948.—"Cisticerco racemoso intraventricular. Extirpação cirúrgica." 6 (3), 247–253. [English summary p. 253.]

(463a) A case in São Paulo in which two [unnamed] cysticerci were removed from the brain is described. Complete recovery followed the operation. P.M.B.

464—Athena. Rome.

*a. LEOTTA, N., 1948.—"Voluminosa peritonite saccata da piccola acefalo-cisti di echinococco da molto tempo rotta." 14, 73–77.

465—Atti della Società Italiana di Scienze Naturali e del Museo Civico di Storia Naturale in Milano.

a. ROMANINI, M. G., 1948.—"Azione del fattore diffusore di *Haemopis sanguisuga* su vari substrati." 87 (3/4), 244–246.

466—Atti della Società Italiana delle Scienze Veterinarie.

a. ROMANELLI, V., 1948.—" Influenza della istamina nella eosinofilia ematica sperimentale da estratti parassitari." 2, 525–530.

(466a) The injection of histamine into the peritoneum and the heart of normal guinea-pigs did not produce any increase in the eosinophils in the blood, but if the guinea-pigs were first injected with an extract of *Ascaris lumbricoides* and the resulting eosinophilia allowed to disappear, the histamine injection then induced an eosinophilia. R.T.L.

467—Auburn Veterinarian. Alabama.

*a. STAPLES, Jr., W. D., 1948.—" The mechanism of acquired immunity against the endoparasites. (A review of the literature)." 4, 98–101, 111.

*b. SCHMITZ, J. A., 1948.—" Phenothiazine—the versatile anthelmintic. (A review of the literature)." 4, 102–104, 112–114.

468—Australian and New Zealand Journal of Surgery.

a. COPPLESON, V. M., 1948.—" Hydatid cyst of the left lobe of the thyreoid." 18 (2), 144.

469—Berliner und Münchener Tierärztliche Wochenschrift.

a. MENDHEIM, H., 1948.—" Ueber die Rolle der Hauskatze als Trägerin und Verbreiterin menschlicher Helminthen." Year 1948, No. 12, p. 138.

(469a) Mendheim deals very briefly with the role of the domestic cat in the spread of helminth infections to man. Trematode and nematode parasites of cats are of no importance in this connection but cestodes are a possible danger. Cats are the principal reservoir hosts of *Diphyllobothrium latum* in East Prussia ; *Taenia taeniaeformis, T. hydatigena, Coenurus serialis* and *Mesocestoides* sp. have all been reported for man in their larval stages. The cat is not considered to play a part in the transmission of hydatid to man. A.E.F.

470—Blood-Horse.

*a. TODD, A. C., ET AL., 1948.—" The causative agent of verminous aneurysm in horses." 52 (10), 484.

471—Boletim da Secretaria da Agricultura, Indústria e Comércio. Pernambuco.

a. CHAVES BATISTA, A., 1948.—" O 'anel vermelho' do coqueiro e a fumigação do solo com D-D." 15 (3/4), 356–387. [English summary pp. 383–385.]

(471a) Red-ring disease of coconut palms in Brazil was first recorded in 1936, and by 1943 had become an important disease in the extensive plantations of the north-east. Batista describes the symptoms of the disease and says that for diagnosis the causal organism, *Aphelenchoides cocophilus*, must be found by microscopical examination of the tissues. The nematode may be in any part of the plant from roots to leaves and nuts, but disease symptoms are shown only when it is in the crown or the leaf bases. The biology of the nematode is discussed and it is suggested that the disease is caused by toxic secretions produced by the parasites in feeding. Dissemination of the parasites is said to be by insects (*Rhynchophorus palmarum* and possibly *Homalinotus coriaceus* and *Rhina barbirostris*), by coconut seed and seedlings, by agricultural implements and by man : spread within a plantation is thought to be by migration of the nematodes in the soil. For control of the disease, all infected plants must be burnt ; soil fumigation with D-D at 400 lb. per acre over a 50-metre radius is recommended. Healthy plants should be treated with insecticide to deter the insect vectors. Plantations on new land should be made with healthy stock after the soil has been fumigated with D-D. M.T.F.

472—Boletim do Serviço Nacional de Pesquisas Agronômicas. Rio de Janeiro.

a. JOFFILY, J. M., 1948.—"A doença do anel vermelho do coqueiro e sua ocorrência no Brazil." No. 3, 64 pp.

(472a) Joffily gives a full account of the occurrence, geographical distribution, economic importance, symptoms and aetiology of the red-ring disease of coconut associated with *Aphelenchoides cocophilus*, and describes, from the literature, the causal nematode. For control of the disease he recommends careful phyto-sanitary measures, the immediate destruction of diseased plants with disinfection of the surrounding soil, and the control of insects visiting the coconut palms which might spread the nematode. M.T.F.

473—Boletín de la Asociación Médica de Puerto Rico.

a. RODRIGUEZ-MOLINA, R., LANG, A. A., ACEVEDO, C. E. & JIMENEZ-TORRES, C. F., 1948.—"Treatment of schistosomiasis mansoni with antimony lithium thiomalate (anthiomaline)." 40 (10), 277–281.

(473a) Twenty-five Puerto Ricans with asymptomatic infection with *Schistosoma mansoni* were each given a total of 30 c.c. of anthiomaline intramuscularly in 3 c.c. doses every second day. All ceased to pass viable eggs before the course of treatment was finished. In nine cases followed for three months, three were positive with viable eggs in stools and on rectal biopsy. R.T.L.

474—Boletín Clínico. Medellín.

a. CORREA HENAO, A. & BOJANINI, E., 1948.—"Quiste hidatídico; presentación del primer caso ocurrido en Colombia." 10 (3), 86–88.

475—Boletín. Dirección de Medicina Veterinaria. Buenos Aires.

*a. DARLAN, L. A., 1948.—"La tenia festoneada o tenia del hígado (*Thysanosoma actinioides*)." 5 (23/26), 18–23; (27/30), 26–31.

*b. CARBONE, P. A., 1948.—"La hidatidosis o equinococosis." 5 (27/30), 34–38.

476—Boletín Epidemiológico. Mexico.

a. RUIZ REYES, F., 1948.—"Resultados de la primera aplicación de hetrazán en la zona oncocercósa de Oaxaca." 12 (5), 195–199.

477—Boletin Mensual. Dirección de Ganadería, Montevideo.

a. MURIALDO, A. M., 1948.—"El cultivo de huevos de *Strongilus equinus* tomado como test de los antihelmínticos." 30 (2), 166–169.

(477a) *Strongylus equinus* eggs, which in culture develop within 24 hours into rhabditiform larvae, offer a convenient biological test for anthelmintics, particularly for carbon tetrachloride, tetrachlorethylene, phenothiazine and oil of chenopodium. The eggs are obtained by trituration of gravid females with quartz sand and physiological saline. The whole is then placed in a central depression in a petri dish filled with chalk. Humidity is maintained by filling a deep circular groove in the chalk with sterile water. E.M.S.

478—Boletín Oficial del Colegio Médico Veterinario Nacional de La Habana.

*a. KOURÍ, P., 1948.—"Diagnóstico, epidemiología y profilaxis de la fascioliasis hepática humana en Cuba. Síndrome eosinofílico febril." No. 3/4, pp. 6–

479—Boletín de la Oficina Sanitaria Panamericana.

a. PAOLIELLO, A., 1948.—"Contrôle da febre amarela e de outras doenças transmitidas por mosquito." 27 (11), 1005–1044. [English summary p. 1044.]

b. VARGAS, L., 1948.—"Control de la oncocerciasis." 27 (12), 1150–1159. [English summary pp. 1156–1159.]

480—Boletín de la Sociedad de Cirugía del Uruguay.

a. CAUBARRÈRE, N. L., 1948.—" Hidatidosis de la pelvis." 19 (1), 5–18. [Discussion pp. 18–20.]
b. UGÓN, V. A., 1948.—" Tratamiento del neumotórax hidático." 19 (1), 21–22.
c. CHIFFLET, A., 1948.—" La hidatidosis hepática es una afección hepato-biliar." 19 (1), 23–35. [Discussion pp. 35–38.]
d. YANNICELLI, R., 1948.—" Quiste hidático de pulmón en el niño. A propósito de 15 casos intervenidos." 19 (1), 54–74.
e. BONNECARRÈRE, E. A. & ARDAO, R., 1948.—" La nefrectomía parcial en la hidatidosis renal." 19 (1), 75–84. [Discussion p. 84.]
f. CAMPO, J. C. DEL, 1948.—" Equinococosis pulmonar.—Retención seca de membrana.—Tratamiento.—Resultados." 19 (4), 353–359. [Discussion pp. 359–365.]
g. LARGHERO YBARZ, P., 1948.—" Hemorragia espontánea en un quiste hidático del hígado con hidatide intacta." 19 (4), 388–391.
h. CAGNOLI, H., 1948.—" El signo de Bado en el diagnóstico radiográfico de la equinococosis ósea." 19 (5), 459–461.
i. CARRERA, I., 1948.—" Hidatidosis múltiple secundaria del piso supramesocólico." 19 (6), 549–554.

481—Boletín de Zootecnia. Córdoba.

*a. JIMÉNEZ, M. P., 1948.—" Setariosis bovina." 4, 383–387.

482—Boletines y Trabajos. Academia Argentina de Cirugía.

a. BREA, M. M. J., SANTAS, A. A. & MARTÍNEZ, J. L., 1948.—" Hidatidosis pulmonar. La resección en el tratamiento de la hidatidosis complicada." 32 (1), 7–25.
b. VALLE, D. DEL, 1948.—" Quiste hidatídico del pulmón." 32 (1), 31–34. [Discussion p. 34.]
c. BREA, M. M. J., 1948.—" Quiste hidatídico no complicado de pulmón. Cierre con oclusión bronquial." 32 (1), 35–36.
d. ALLENDE, C. I., 1948.—" Quiste hidatídico, inalterado, del pulmón ; cierre, sin oclusión bronquial." 32 (5), 162–164.
e. MANFREDI, F. J. & BUSCHIAZZO, A., 1948.—" Quiste hidatídico de pulmón. Tratamiento biológico de Calcagno. Curado. Resultado alejado." 32 (6), 185–188. [Discussion (7), 189–194 ; (9), 237–240.]
f. CAEIRO, J. A., 1948.—" Quiste hidatídico del pulmón. (Operación de Posadas.)" 32 (9), 259–260.
g. NICOLA, C. P. DE, FERREIRA, J. A. & CARPANELLI, J. B., 1948.—" Hidatidosis abierta en vías biliares. (Comentarios fisiopatológicos y clínicos.)" 32 (15), 402–418. [Discussion p. 419 ; (16), 435–436 ; (18), 469.]
h. DIEZ, J. & COTTINI, G. F., 1948.—" Quiste hidatídico primitivo del diafragma. Freno-quistectomía." 32 (23), 599–606. [Discussion pp. 606–609 ; (24), 616–618 ; (25), 641–643.]

483—Bollettino della Società Italiana di Medicina e Igiene Tropicale (Sezione Eritrea).

a. PELLEGRINI, D., 1948.—" Il *Cisticercus dromedarii* nella capra." 8 (3/4), 172–175. [English summary p. 174.]

(483a) *Cysticercus dromedarii* [= *C. dromedarius* Pellegrini, 1945] is reported from five out of 100 goats slaughtered at Merca and Kisimayu. As only a single cyst occurred in the liver in each case, Pellegrini is of the opinion that the goat is only an occasional host. R.T.L.

484—Buletinul Societăţii de Ştiinţe din Cluj.

a. EPURE, E. X., 1948.—" *Cystobranchus respirans* (Troschel), un rare Ichtyobdellide trouvé en Roumanie." 9 (4), 557–563.

485—Bulletin de l'Académie Vétérinaire de France.

a. GUILHON, J. & RIOUX, J., 1948.—" Action des sels organiques d'antimoine sur *Dicrocoelium lanceolatum*." 21 (8), 343–345.
b. GUILHON, J. & RIOUX, J., 1948.—" Recherches sur la toxicité des sels organiques d'antimoine pour *Dicrocoelium lanceolatum*." 21 (9), 381–385.

(485a) Pentastib (*p*-aminophenylstibinate of methylglucamine) and glucantime (N-methylglucamine antimoniate) proved quite inactive when given to sheep infected with

Dicrocoelium dendriticum, even at doses containing 15 times as much antimony (pentavalent) as the effective dose of fouadin (which contains trivalent antimony). E.M.S.

(485b) Three trivalent organic antimonials, sodium antimony tartrate (37·7% antimony), anthiomaline (16·6% antimony) and fouadin (13·5% antimony) were tested against *Dicrocoelium dendriticum* in sheep. At dosages equivalent to 0·34 gm. antimony only fouadin was relatively effective and non-toxic. The efficacy was inversely proportional to the antimony content, and both the inefficacious drugs produced fatal results. E.M.S.

486—Bulletin of the Department of Agriculture, California.

a. ANNEREAUX, R. F., 1948.—" The internal parasites of poultry." **37** (3), 145–150.

(486a) In California helminths are not as important in the causation of disease in poultry as in many other parts of the U.S.A. *Ascaridia galli* and *Heterakis gallinae* are the most important. This paucity of parasitic infections is attributed to the large business type of the poultry industry and to the soil and climatic conditions. In California the only fluke recorded so far in poultry is *Echinoparyphium recurvatum* but *Echinostoma revolutum*, *Zygocotyle lunata* and *Ribeiroia ondatrae* are potential parasites as they are present in aquatic birds. Most of the ten species of cestodes known to infect poultry and turkeys elsewhere in the U.S.A. probably occur in California. The Bulletin gives succinct notes on treatment and control. R.T.L.

487—Bulletin. Louisiana Agricultural Experiment Station.

*a. MAYHEW, R. L., 1948.—" The parasites and parasitic diseases of cattle." No. 428, 45 pp.

488—Bulletin Médical de L'Afrique Occidentale Française.

a. DEJOU, L., 1948.—" Essais de traitement de l'éléphantiasis tropical du scrotum par la sulfamidothérapie prolongée, par la pénicilline et la streptomycine." **5** (1), 31–37.

489—Bulletin et Mémoires de la Société Médicale des Hôpitaux de Paris.

a. MASSIAS, C. & NGUYÊN DINH HAO, 1948.—" Péricardites putrides. Premier cas à la suite d'un abcès sous-phrénique consécutif à une ascaridiose intrahépatique ; deuxième cas à la suite d'une oesophagite gangréneuse par arête de poisson." 4e Série, **64** (16/17), 460–462.
b. AUDOYE & DESSAUSSE, 1948.—" Sur un nouveau cas d'infestation par la grande douve du foie, *Fasciola hepatica*." 4e Série, **64** (26/27), 920–923.
c. FOUQUET, J., HEIMANN, V. & DEJOURS, M., 1948.—" Abcès miliaires du foie à colibacilles, complication d'une ascaridiose. Guérison par la streptomycine." 4e Série, **64** (26/27), 930–933.
d. BERTRAND-FONTAINE, SCHNEIDER, J., WOLFROMM, R. & CAGNARD, V., 1948.—" Un cas de filariose cérébrale (double hémiplégie au cours d'une filariose à *F. loa*)." 4e Série, **64** (32/33), 1092–1095.
e. TURIAF, J., BLANCHON, P. & CABAIL, J. L., 1948.—" Syndrome de Löffler (formes aiguës fébriles et formes mineures). Asthme et ascaridiose." 4e Série, **64** (36/37), 1204–1214.
f. RAVINA, A., NORY, J. & AVRIL, J., 1948.—" Episodes pathologiques multiples ayant précédé et suivi l'apparition d'infiltrats pulmonaires éosinophiliques fugaces. Quelques remarques à propos des infiltrats pulmonaires labiles." 4e Série, **64** (36/37), 1215–1220.

(489f) The authors review a number of cases of the disease called by Loeffler " l'infiltrat éosinophilique fugace". They consider that the transitory eosinophilia is related to the intrapulmonary migration of Ascaris larvae, and that the meningitis which follows is due in some cases to the migration of the larvae in the cerebral meninges. Prolonged pathological conditions may be due to slight but repeated Ascaris infections. S.W.

490—Bulletin. Mississippi Agricultural Experiment Station.

a. BAIN, D. C. & PRESLEY, J. T., 1948.—" Diseases of truck crops and their control in Mississippi." No. 453, 27 pp.

(490a) For root-knot in market garden crops Bain & Presley recommend soil treatment with ½ teaspoonful of chloropicrin in holes 6 in. deep and 12 in. apart. After the

holes are filled in the soil is watered until the surface is wet, aerated after two or three days, and planted after about a fortnight. With cucurbits it is sufficient to make one hole at the site of each plant. Alternatively, a three-year rotation with sorghum, maize, peanuts, Clay cowpea or velvet bean will reduce the eelworm population. B.G.P.

491—Bulletin. National Chrysanthemum Society.

*a. ANDREWS, G. E., 1948.—" Program for nematode control." 4 (1), 11.

492—Bulletin. New Zealand Department of Agriculture.

a. WHITTEN, L. K., 1948.—" Control of internal parasites by phenothiazine." No. 189, 7 pp. [Revised.]

b. JACKS, H., 1948.—" Disinfection of glasshouse soil. Control of soil-borne diseases and pests by application of heat or chemicals." No. 314, 12 pp.

(492b) For the control of soil-borne diseases under glass, Jacks recommends soil disinfection by steam or by chemical injection. He gives details of the Hoddesdon pipe system, which should maintain a soil temperature of 180°F. to 210°F. for 10–20 minutes ; buried 18 inches deep, the pipes sterilize a depth of 2 ft. of soil. Formalin drenching controls fungus diseases but not eelworm or weeds. Chloropicrin, D-D mixture, and methyl bromide solutions are nematicidal, for this purpose D-D being the cheapest (22/- per 1,000 sq. ft. at 3 ml. per sq. ft.). Field injections are also briefly described. B.G.P.

493—Bulletin der Schweizerischen Akademie der Medizinischen Wissenschaften.

a. GLANZMANN, E. & GUINAND, J., 1948.—" Strongylose der Ziegen und Ziegenmilchanämie der Ratten." 4 (2/3), 214–227. [English, French & Italian summaries pp. 223–227.]

(493a) Glanzmann & Guinand show that an ether extract from *Strongyloides* of the goat has a marked haemolytic effect on human erythrocytes and that haemolysins and toxins can be demonstrated in ether extract of goat's milk. The haemolysins act only as indicators of the passage of toxins to milk since experimental goat's milk anaemia produced in rats is a hypochromic iron deficiency anaemia : this anaemia can be prevented and cured by administration of folic acid. Further work is necessary before the exact relationship between *Strongyloides* infection in goats and goat's milk anaemia in infants can be determined. A.E.F.

494—Bulletin de la Société de Chimie Biologique.

a. PANIJEL, J., 1948.—" Contribution à l'étude biochimique de la fécondation chez *Ascaris megalocephala*. II.—Le problème général posé par la méthode de Gram." 30 (1/2), 116–120.

495—Bulletin de la Société Neuchâteloise des Sciences Naturelles.

a. DUBOIS, G. & RAUSCH, R., 1948.—" Seconde contribution à l'étude des 'strigeides' ('Trematoda') nord-américains." Ser. 3, 71, 29–61.

b. BAER, J. G., 1948.—" L'évolution parallèle des helminthes parasites et de leurs hôtes vertébrés." Ser. 3, 71, 155–156.

(495a) To complete their "Contribution to the study of North American strigeids (Trematoda)" [see Helm. Abs. 19, No. 4a] Dubois & Rausch list 20 species of which seven are Strigeidae and 13 are Diplostomatidae. They describe three new species, viz. *Ophiosoma crassicolle* n.sp. from *Botaurus lentiginosus* which can be distinguished from *O. wedlii* by the size of the neck ; *Neodiplostomum* (*Conodiplostomum*) *accipitris* n.sp. from *Accipiter cooperi* which is differentiated from *N. palumbarii* by its small size and the more posterior position of the ventral sucker ; *Uvulifer claviformis* n.sp. from *Megaceryle alcyon*, distinguishable from *U. magnibursiger* by differences in the copulatory bursa and especially by the extension of the yolk glands to the rounded end of the body. Four new varieties are also described, viz., *Nematostrigea serpens annulata* n.var., *Diplostomum baeri bucculentum* n.var., *N.* (*Conodiplostomum*) *spathula elongata* n.var. and *Posthodiplostomum microsicya prosostomum* n.var. R.T.L.

(495b) [This paper appears in full in *Ann. sci. Franche-Comté*, Besançon, 1947, Année 2, pp. 99–113. For abstract see Helm. Abs., 16, No. 395a.]

496—Bulletin de la Société des Sciences Naturelles de Tunisie.

a. HELDT, H., 1948.—"Note sur une anomalie de l'appareil génital chez une femelle d'*Ascaris megalocephala*." Fasc. 1, pp. 25–26.

497—Bulletin of the State Board of Agriculture, Dover, Delaware. (Transactions of the Peninsula Horticultural Society.)

a. JEFFERS, W. F., [1948].—"Meeting the increasing nematode problem on the Eastern Shore." [62nd Annual Meeting], 38 (5), 101–103.

(497a) Root-knot occurs in several thousand acres of light sandy soil on the eastern seaboard of the Delaware peninsula. Jeffers recommends *Crotalaria spectabilis* as a trap crop and green manure, which is however poisonous to livestock. An experiment with D-D mixture at 200, 300 and 400 lb. per acre injected in either November or April, using cucumber as an indicator crop, showed no difference in control between injection times and no consistently better results at higher rates than at 200 lb. per acre, where the infestation index was about 10% of that in untreated plots. B.G.P.

498—Bulletin. University of Nevada Agricultural Experiment Station.

a. SMITH, O. F., 1948.—"Diseases of alfalfa in Nevada and their influence on choice of varieties." No. 182, 28 pp.

(498a) Amongst various diseases of alfalfa, stem nematode (*Ditylenchus dipsaci*) and root-knot (*Heterodera marioni*) are fairly prevalent. A brief description of damage by *D. dipsaci* is given, and seed-borne infection is mentioned amongst the ways in which the disease is spread. Crop rotation and the use of resistant varieties give some control; the variety Nemastan is the only resistant one known at present. J.B.G.

499—Cahiers Médicaux de l'Union Française. Algiers.

a. VERGOZ, C. & CASANO, 1948.—"Du traitement du kyste hydatique du foie ouvert dans la cavité gastrique." 3 (20), 339–343.

500—Calcutta Medical Journal.

a. CHAKRABARTY, R., 1948.—"Surgical condition arising out of impaction of round worms in the intestine." 45 (11), 420–421.

501—California Agriculture.

a. RASKI, D. J. & ALLEN, M. W., 1948.—"Sugar-beet nematode; identification and recommendations for control of the pest in California fields." 2 (11), 8, 16.
b. ALLARD, R. W., 1948.—"Root-knot nematode; Westan variety of baby limas is highly resistant to the pest." 2 (11), 9.

(501a) Raski & Allen state that the only effective method for the control of the sugar-beet nematode [*Heterodera schachtii*] under Californian conditions is by the use of well devised crop rotations. They recommend the planting of non-susceptible crops, cultivations to suppress susceptible weeds, early planting of crops to get the young plants well established, and the protection of uninfested land against the introduction of the parasite from infested fields. Symptoms of attack are given and the appearance of the cysts on the whiskered roots is indicated. The resistant nature of the cysts and their contents is also explained. It is stated that attempts to control the pest by chemical means, i.e. fumigation, have so far failed under Californian field conditions. T.G

(501b) The climatic conditions pertaining in Stanislaus and San Joaquin counties of California are well suited to the cultivation of dwarf lima beans, and Allard points out that a hybrid baby lima named Westan has been found to be resistant to the root-knot nematode, a serious pest of this crop. He compares it point by point with the susceptible variety Wilbur which is the most favoured and best yielding baby lima, and though Westan is not quite as good as Wilbur in some characters it is the best available for use on nematode-infested soils. T.G.

502—Campo y Suelo Argentino. Buenos Aires.

*a. VERA, V. R. DE, 1948.—" La hidatidosis cardiaca y las perdidas que ocasiona." 32 (375), 18–19.
*b. CAFFE, P., 1948.—" La fenotiazina : su uso en veterinaria." 32 (375), 46–47.
*c. CEDRO, V. C. F., 1948.—" La *Moniezia expansa* y sus estragos en el ovino." 32 (382), 18–19, 21.
*d. MORENO, A. F., 1948.—" Anguilulosis de la raíz." 32 (386), 33.

503—Canadian Fish Culturist.

*a. LACHANCE, F. DE S., 1948.—" Black spot disease of bass. II. Snail host of *Uvulifer ambloplitis*." 3, 7–15.

504—Canadian Grain Journal.

*a. SWALES, W. E., 1948.—" Control of parasites in livestock." [Abstract of an address to the Feed Manufacturers' Section of the Winnipeg Board of Trade.] 3 (9), 6–7.

505—Canadian Journal of Medical Technology.

*a. BARODDY, B. J., 1948.—" A separatory-funnel gravitational sedimentation technique for diagnosis of schistosomiasis in feces." 10 (1), 1–4.

(505a) Baroody describes a technique for the concentration of eggs of *Schistosoma mansoni* and *S. japonicum*, which although impracticable for mass work is useful in the field. Fifteen grammes of faeces are emulsified in 200 c.c. of cold tap-water and allowed to settle in a separatory funnel for 30 minutes. The sediment is then resuspended twice, and allowed to settle for 15 minutes each time, when it is ready for microscopic examination. To apply a hatching test, warm water is added in the funnel so that the meniscus lies in the short neck. The surface fluid may then be examined for miracidia. [Based on an abstract in Biol. Abs., 24 (1), No. 2792.] S.W.

506—Časopis Československých Veterinářů.

a. JAREŠ-GOETZ, J., 1948.—" Parasitární nemoci zvířat ve vztahu k zdravotním poměrům venkova." 3 (10), 271–277.
b. TRAWIŃSKI, A., 1948.—" Trichinosa." 3 (16), 466–467.
c. HRDLIČKA, F., 1948.—" Trichinosa v poválečných letech." 3 (16), 467–469.
d. BEZRUČ, K., 1948.—" Trichinosa s hlediska úředních předpisů." 3 (16), 469–473.
e. DOROŠKO, J. N., 1948.—" Nová methóda dehelminthizácie hydiny prostriedkom CCl_4." 3 (17), 506–508.
f. KUDRNA, J. & KRZEMIEN, J., 1948.—" Strongylosa plic u skotu na pastvině." 3 (20), 603–604.

(506a) Jareš-Goetz discusses the occurrence of most of the common parasites transmissible to man, and gives prophylactic and control measures. C.R.

(506b) [Serological diagnosis of trichinelliasis.]

(506c) Hrdlička examined rats, dogs, cats and foxes in Czechoslovakia and found them free from trichinelliasis, but according to him the danger of infestation exists. He thinks that the links in the chain are fox-fox, fox-pig and rat-fox. C.R.

(506d) Bezruč gives a historical review of all regulations on trichinelliasis which have appeared in Czechoslovakia. C.R.

(506e) [This is a translation of a paper which appeared in *Veterinariya*, 1948, 25 (4), 27–29. For abstract see Helm. Abs., 17, No. 375k.]

(506f) Kudrna & Krzemien report the death of 100 cattle (mainly young) out of a herd of 1,200 as a result of metastrongylosis of the lungs. They describe the clinical symptoms and the pathological lesions in the lungs as well as general prophylactic measures. C.R.

507—Časopis Lékařů Českých.

a. REJSEK, K., DONNER, L. & REJSKOVÁ, M., 1948.—" Chronická otrava z léků proti roupům. (Otrava penta-methyl-p-rosanilinem a aceticobenzoátem hlinitým.)" 87 (1), 9–11. [French summary pp. 10–11.]

(507a) The authors report a case of chronic intoxication caused by the drugs used against *Enterobius vermicularis*. The patient in the course of treatment received 2·5 kg. of aluminium acetobenzoate and about 80 gm. of penta-methyl-*p*-rosaniline. The main symptoms were gastro-intestinal with pain in the long bones and joints, and marked changes in the blood. C.R.

508—Chacaras e Quintaes. São Paulo.

*a. MELLO, M. J. DE, 1948.—[Controlling worms in cattle and swine.] 78, 451–452. [In Portuguese.]

509—Chacra. Revista Mensual de Agricultura, Ganadería e Industrías Anexas. Buenos Aires.

*a. SIMONPIETRI, R. H., 1948.—" El quiste hidatídico, bolsa de agua o 'equinococosis'." 18 (208), 14, 101.

510—Chapingo.

*a. VALLE GARIBÍ, E. DEL, 1948.—" Los nematelmintos en la agricultura y en la ganaderia. 3." 23, 47–50.

*b. VALLE GARIBÍ, E. DEL, 1948.—" Los nematelmintos en la agricultura y en la ganaderia." 24, 77–79; 25, 118–119, 134.

511—Chirurg. Berlin.

a. WILDEGANS, H., 1948.—" Zur Ascaridiasis der Gallenwege." 19 (4), 176–179; (6), 276–277.

512—Chirurgia Toracica. Rome.

a. RABBONI, F., 1948.—" Sulla terapia chirurgica dell'echinococco polmonare. (Contributo clinico di 16 casi.)" 1 (5/6), 360–377.

513—Circular. Extension Service, Ministry of National Economy, Syria Republic.

a. NAJJAR, H., 1948.—[The liver fluke.] No. 21, 8 pp. [In Arabic : English summary.]

514—Circular. Oklahoma A. & M. College Extension Service.

a. KYD, S., 1948.—" Controlling sheep parasites." No. 492, 3 pp.

515—Circular. Pennsylvania State College Agricultural Extension Service.

a. DOSSIN, C. O. & GORDEUK, Jr., S., 1948.—" Preventing poultry diseases." No. 322, 26 pp.

516—Citrus. Tampa.

*a. SUIT, R. F., 1948.—" The cause of spreading decline : disease appears to be an infestation of rootlets by the citrus nematode." 10 (10), 14–15.

517—Citrus Industry.

*a. DUCHARME, E. P., 1948.—" Resistance of *Poncirus trifoliata* rootstock to nematode infestation in Argentina." 29 (7), 9, 15.

518—Citrus Leaves.

*a. FOOTE, F., 1948.—" Nematodes cause serious citrus losses." 28 (4), 12, 20.

519—Clinica Nuova. Rome.

a. CENTO, R., 1948.—" Tre casi di cisti idatidea del polmone trattati mediante collassoterapia (pneumotorace e pneumoperitoneo) con esito in guarigione." 6 (5), 191–196.

520—Clinical Proceedings. Journal of the Cape Town Post-Graduate Medical Association.

a. SAINT, C. F. M., 1948.—" Hydatid disease : some features, familiar and not so familiar." 7 (10), 315–338.

521—Comptes Rendus Hebdomadaires des Séances de l'Académie d'Agriculture de France.

a. GUILHON, J. & RIOUX, J., 1948.—" Action du tétrachlorure de carbone sur la petite douve." 34 (12), 836–838.

(521a) Guilhon & Rioux found that pure carbon tetrachloride had no effect on *Dicrocoelium dendriticum* when administered to three infected sheep in repeated doses of 1–5 c.c. Larger doses of 9–31 c.c. mixed with hexachlorethane daily for three days, although vermifugal and to a lesser degree vermicidal, gave rise to serious symptoms in the two sheep used for this experiment. R.T.L.

522—Cornell Veterinarian.

a. CHEATUM, E. L. & COOK, A. H., 1948.—" On the occurrence of the North American guinea worm in mink, otter, raccoon, and skunk in New York State." 38 (4), 421–423.

(522a) *Dracunculus insignis* is reported from *Lutra canadensis*, *Mephitis nigra*, *Mustela vison* and *Procyon lotor* in New York State. R.T.L.

523—Cyprus Medical Journal.

a. ROSE, A. C., 1948.—" An interesting case of hydatid cyst of the spleen." 1 (6), 3–4.
b. MARANGOS, G., 1948.—" Hydatid disease of the liver and lung and its surgical treatment." 1 (8), 3–19. [Greek summary pp. 16–19.]

524—Dansk Ornitologisk Forenings Tidsskrift.

a. CHRISTIANSEN, M., 1948.—" Epidemiagtigt Sygdomsudbrud blandt Ederfugle (*Somateria mollissima* L.) ved Bornholm, foraarsaget af dyriske Snyltere." 42 (2), 41–47.

(524a) An outbreak of a disease among eider ducks (*Somateria mollissima*) at Bornholm in August-September 1947 is described. All the birds examined were attacked by *Polymorphus boschadis*. S.B.

525—Deutsche Gesundheitswesen (Das).

a. BECKERT, W., 1948.—" Über Askaridiasis." 3 (11), 321–324. [English, French and Russian summaries p. 324.]
b. KRAUSS, H., 1948.—" Ueber die Bewährung der Blutegel- und Schröpfbehandlung beim peripheren Rheumatismus." 3 (17), 519–522.

(525a) Beckert gives a general account of ascariasis in man, dealing particularly with sources of infection, diagnosis, pathology, complications, treatment and prophylaxis. The high incidence in post-war Germany is attributable to increased consumption of uncooked vegetables and to the use of human faeces as manure. Beckert considers ascaridol to be the remedy of choice ; he has also successfully administered pumpkin seeds. A.E.F.

(525b) Leech therapy has proved excellent in reducing the pain, swelling and other functional disturbances in peri-articular swellings of acute and chronic polyarthritis and the acute myalgia and neuralgic pains of rheumatism of the spinal column. R.T.L.

526—Deutsche Medizinische Rundschau.

a. RATHSCHECK, H.-J., 1948.—"Perforation des Duodenalstumpfes durch einen *Ascaris lumbricoides*." 2 (1), 21–23.
b. BARTLAKOWSKI, J., 1948.—"Die Ascaridenplage in der Papenburger Emsniederung. Ein chirurgischer Beitrag zu einem Nachkriegsproblem." 2 (1), 23–24.
c. WILDEGANS, 1948.—"Diagnose und Therapie der Ascaridiasis der Gallenwege." 2 (3), 109.

527—Deutsche Medizinische Wochenschrift.

a. LÜDERITZ, B., 1948.—"Die Chloroform-Calomel-Kur zur Behandlung der Askaridiasis." 73 (17/20), 216.
b. KOCH, E., 1948.—"'Lederer'-ähnliches Syndrom als Ausdruck einer hämolytisch-depressiven Krise bei einer Bothriocephaluserniciosa." 73 (17/20), 216–218.
c. SCHENCK, G. O. & SCHULZE-BUSCHOFF, H., 1948.—"Synthetisches Askaridol, eine neue Möglichkeit der Spulwurmbehandlung." 73 (29/32), 341–344.
d. SCHUBERT, R., 1948.—"Erfahrungen mit dem synthethischen Askaridol 'Schenck'." 73 (29/32), 344–345.

(527a) Lüderitz has successfully treated a series of twelve human cases of ascariasis with chloroform and calomel. In the evening barley broth was administered, followed by 0·45 gm. calomel *per os*. The next morning, on an empty stomach, 4·0–6·0 gm. chloroform was given by duodenal sound followed half-an-hour later by 0·45 gm. calomel (also by duodenal sound): 3–4 hours later intestinal lavage with warm water was carried out. The treatment was without secondary effects and could be repeated, where necessary, after an interval of two or three days. A.E.F.

(527c) Schenck & Schulze-Buschoff describe a synthetic ascaridol ("Askaridol" Schenck) which is chemically and physically identical with the effective anthelmintic principle of chenopodium oil. "Askaridol" Schenck was used in a series of human infections, and was effective in every case where the presence of Ascaris had been demonstrated. There were no side effects. The synthetic substance is said to be purer and more stable than natural ascaridol. A.E.F.

(527d) Schubert has treated a further series of 35 human Ascaris infections with the new synthetic preparation "Askaridol" Schenck [see preceding abstract]. The treatment was effective in 29 cases, and apart from one case of nausea there were no side effects. The fact that several cases which had not responded to treatment with chenopodium oil were cured by the new treatment seems to show that the stability of "Askaridol" Schenck makes a more exact dosage possible. A.E.F.

528—Día Médico. Buenos Aires.

*a. SANTAS, A. A., 1948.—"Tratamiento de los quistes hidáticos del pulmón." 20, 157.
*b. LEONI IPARRAGUIRRE, C. A., 1948.—"Seudolitiasis biliar por quiste hidatídico." 20 (15), 537–540; (17), 625–628.
*c. AMARGOS, A., MENÉNDEZ, H. & BELLO, R. DI, 1948.—"Cor pulmonale hidatídico." 20 (16), 600–607.
*d. ARANA IÑIGUEZ, R., GARCÍA CAPURRO, R. & CAUBARRERE, N. L., 1948.—"Hidatidosis vertebral; a propósito de un caso diagnosticado precozmente." 20 (19), 704–710.
e. GOÑI MORENO, I., 1948.—"Quistes hidatídicos del pulmón. Su tratamiento." 20 (37), 1353–1356.
f. BREA, M. M., 1948.—"Tratamiento quirúrgico de la hidatidosis pulmonar. Nuevas orientaciones." 20 (40), 1498–1499.
g. GALLI, H. O. & RAMIREZ, M. E. R. DE, 1948.—"Parasitosis intestinal infantil en Caseros." 20 (46), 1700–1701.
h. CASIRAGHI, J. C., 1948.—"Quistes hidatídicos retrovesicales." 20 (71), 2929–2932.

529—Diseases of the Chest. Chicago.

a. MACKIE, T. T., 1948.—" Parasitic infections of the lung." 14 (6), 894–904. [French summary pp. 903–904. Discussion pp. 904–905.]

(529a) In this review of the various organisms which cause significant pathological changes in the human respiratory system, those helminths which occur in the lungs as adults or as cystic or migrating larvae are mentioned. Owing to the extension of travel facilities the clinician should realise that the endemic areas of these parasites have different geographical distributions and that in some instances there may be a prolonged latent period between the time of infection and the development of clinical symptoms. R.T.L.

530—Duodecim.

*a. HUHTALA, A., 1948.—" Matoläakemyrkytyksistä ihmisillä." [Anthelmintic poisoning in man.] 64 (8/9), 640–659.

531—Écho Médical du Nord.

*a. CHEVAT, H. & BERTEAUX, 1948.—" Présentation de deux cas de kyste hydatique du foie à évolution antérieure." 3ème Série, 19 (4), 94.

532—Economic Botany. New York.

a. McMURTREY, Jr., J. E., 1948.—" Growing better tobacco." 2 (3), 326–332.

(532a) In this paper setting out the nutritional requirements of tobacco for the production of good quality leaf, mention is made of the fact that seed beds can be maintained free of root-knot (*Heterodera marioni*) infestation by steam sterilization by the inverted pan method and that good control of the pest has been obtained by the use of a mixture of ½ lb. of calcium cyanamide and 1 lb. of urea per square yard. It is further stated that on light soils where root-knot is prevalent tobacco should not be grown in rotations with sweet potatoes, Irish potatoes, corn, soybeans, cotton, tomatoes, lespedeza and cowpeas. Practical control of root-knot can be achieved by growing tobacco in a 3-year rotation using Spanish peanuts and oats or rye. A 2-year or longer weed cover is stated usually to give a good control of root-knot in the following tobacco crop. T.G.

533—Extension Circular. Department of Agriculture, Jamaica.

a. EDWARDS, W. H., 1948.—" Tomato pests and their control." No. 22, 11 pp.

(533a) Crop failures due to eelworms which penetrate the roots of tomatoes and cause galls are most frequent on irrigated areas of the alluvial plains in Jamaica, but are seldom met with in red soils. The only remedy is long-term rotation excluding tomato, tobacco and garden egg more often than once in five years. If infestation is likely, seedlings should be raised in sterilized or virgin soil and, on transplanting, rapid root growth should be encouraged by application of fertilizers, water and humus. M.T.F.

534—Farm Research. New York State and Cornell Agricultural Experiment Station.

*a. MAI, W. F., 1948.—" Studying the golden nematode disease." 14 (2), 3.
*b. NEWHALL, A. G., 1948.—" Fumigation controls nematodes in the field." 14 (4), 8–9.

535—Farmacoterapia Actual. Madrid.

a. FERNANDEZ CARRIL, R., 1948.—" Tratamiento de la anquilostomiasis." 5 (45), 205–206.
b. CALVO SOLANAS, G., 1948.—" Tratamiento de la oxiuriasis." 5 (47), 354–359.

536—Farmer-Stockman. Oklahoma City.

*a. BLACKWOOD, B. B., 1948.—" Now you can stop root knot." 61 (9), 31.

537—Farmer's Weekly. Bloemfontein.

a. MÖNNIG, H. O., 1948.—"Effective remedy against worms in sheep. Details of phenothiazine treatment against persistent disease." 75, 95. [7th July.]

(537a) Mönnig deals briefly with the bionomics of the larval stages of the various gastro-intestinal strongyles of sheep in the summer rainfall areas of South Africa, and suggests a scheme of prophylactic dosing which is claimed to be inexpensive and effective for the maintenance of health and productivity in sheep. He states that phenothiazine is the most effective remedy for these worms. For the hookworm [evidently *Gaigeria pachyscelis*] he recommends dosing with "tetrasol" at regular intervals of 3–6 weeks. P.L.leR.

538—Feuille des Naturalistes. Paris.

a. DEVANTOY, J., 1948.—"Les prédateurs et les parasites de la chrysomèle du peuplier." 50e Année, 3 (8), 85–89.

(538a) The only helminth listed among the parasites of *Melasoma popula* on the poplar is the larva of *Hexamermis* sp. Hitherto no nematode has been observed in *M. popula* and Mermithidae are still little known in France. R.T.L.

539—Florists' Review.

*a. McWHORTER, F. P., 1948.—"Prevent leaf nematodes from damaging your Croft lilies in greenhouse planting." 101 (2617), 40–41.

*b. WIEMAN, J. S. & WILLIAMSON, Jr., H. C., 1948.—"Crop inspection report." 102 (2632), 44.

540—Försök och Forskning. Stockholm.

a. BINGEFORS, S., 1948.—"Växtföljden och 'klövertrötthet' orsakad av nematodangrepp." 5 (12), 94–95.

(540a) Bingefors gives a popular account of "clover sickness" caused by the clover eelworm in Sweden, and emphasizes the importance of suitable crop rotations in controlling the parasite. It is generally considered that 4–9 years should elapse between two clover crops, i.e. the land should be used only once in eight years. In many places it is difficult to arrange this interval : where the ground was formerly used mostly for long-term grass leys, an improvement in the size and quality of the yield has been obtained by going over to short lasting clover leys. A possible way of guarding against nematode damage when long intervals between clover crops cannot be arranged is to use a highly resistant red clover strain. One can also cultivate one's own seed, as a means of keeping the infection from clean land. Red clover can be used to some extent side by side with lucerne or alsike, which are not much damaged by nematodes. J.T.G.

541—Food Packer. Chicago.

a. CHITWOOD, B. G., 1948.—"Soil insects and soil fumigation." 29 (2), 69.

(541a) In spite of its title, Chitwood's brief article discusses nematicides, listing the principal ones, their trade names and the firms supplying them. B.G.P.

542—Fragmenta Faunistica Musei Zoologici Polonici.

a. PAWŁOWSKI, L. K., 1948.—"Contribution à la connaissance des sangsues (*Hirudinea*) de la Nouvelle-Écosse, de Terre-Neuve et des îles françaises Saint-Pierre et Miquelon." 5 (20), 317–353. [Polish summary pp. 352–353.]

(542a) Pawlowski gives the zoogeographical distribution and ecology of 13 species of Hirudinea. Five of these are reported from Nova Scotia for the first time, and five are new records for Newfoundland. Two species are new records for Saint-Pierre and one species is new to Miquelon. All these forms are considered to be of American origin. R.T.L.

543—Freyr. Mánadarrit um Landbúnad.

*a. SIGURÐSSON, B., 1948.—"Fenothiasin." 43 (1/2), 23–24

544—Fruit Belge.

a. ANON., 1948.—"Les traitements antiparasitaires du fraisier." 16 (84), 122–124.

545—Fruit-Grower, Market Gardener and Glasshouse Nurseryman.

a. HITCHINS, P. E. N., 1948.—"Some recent experiences with DD." 106 (2761), 673.

(545a) Hitchins refers to experiences with D-D mixture in the control of root-knot disease in tomato glasshouses. Used at the rate of 300 lb. per acre, it greatly reduced but did not fully eradicate root-knot; roots with small knots, fresh and hard as if formed late in the season, were found near the pipes and partition walls. Adequate cultivation, cooling and drying of the soil is recommended in preparation for autumn injection, which might need to be applied at 400 lb. per acre. B.G.P.

546—Fruits et Primeurs de l'Afrique du Nord. Édition Marocaine.

a. COURANJOU, A., 1948.—"Un ennemi redoutable des jeunes orangers, l'anguillule des racines : 'slow decline' de Californie, 'spreading decline' de Floride." 18 (197), 374–375.

(546a) Couranjou gives a rather popular account of the citrus-root nematode, *Tylenchulus semi-penetrans*, as it affects orange trees in North Africa. D-D is recommended for control. T.G.

547—Gaceta Médica de Caracas.

*a. POTENZA, L., FEBRES CORDERO, R. & ANDUZE, P., 1948.—"Oncocercosis humana en Venezuela." 56, 219–

548—Gaceta Médica Española.

a. GONZÁLEZ CASTRO, J., 1948.—"Fasciolosis humana y animal." 22 (1), 1–15; (2), 51–55; (3), 103–107; (4), 138–141; (5), 183–188; (6), 225–230; (7), 267–270; (8), 309–312; (9), 346–352; (10), 389–392; (11), 429–432; (12), 464–469.

b. MARÍN AMAT & BENZO, 1948.—"Quiste hidatídico de la órbita, operación-curación." 22 (7), 275.

c. MARÍN AMAT & MARÍN ENCISO, 1948.—"Cisticerco del vítreo." 22 (7), 275.

(548a) González Castro summarizes the history, morphology, life-cycle, pathogenicity, pathology, laboratory diagnosis, prophylaxis and treatment of fascioliasis in man and animals. Information is given on its incidence in domestic animals and on the presence of *Limnaea truncatula* in the various provinces of Spain and particularly in Granada. R.T.L.

549—Gaceta Médica de México.

a. FUENTES DELGADO, M., 1948.—"Formas anatomoclinicas de la cisticercosis cerebral." 78 (3/4), 156–173.

b. PUIG SOLANES, M., 1948.—"Gonioscopia en los enfermos oncocercosos." 78 (5/6), 302–316.

550—Gartneryrket.

a. FJELDDALEN, J., 1948.—"Fosformidler mot bladål på begonia og chrysanthemum." No. 52, pp. 645–646.

(550a) Phosphorus compounds have been used for the control of begonia and chrysanthemum eelworm, and very good results have been obtained with two or three treatments with Bladan E 605 f. S.B.

551—Gazeta Médica Portuguesa.

a. FURTADO, D., MARQUES, V., AZEVEDO GOMES, M. & FERREIRA, M., 1948.—"Quistos hidáticos da coluna vertebral com possível propagação medular." 1, 127–133.

552—Geneeskundige Gids. The Hague.

a. BIJLMER, J., 1948.—"Het faecesonderzoek op dierlijke parasieten." 26 (5), 95–105.
*b. KOUWENAAR, W., 1948.—"Tropische eosinophilie door besmetting met filaria." 26 (13), 274–275.

553—Gesundheits-Ingenieur.

a. BAUMHÖGGER, W., 1948.—"Spulwurmplage und Abwasserbeseitigung in Darmstadt." 69 (2), 40–43.

(553a) The extremely high incidence of human ascariasis in the Darmstadt area (80–90% of the inhabitants have been found to be infected) has led to investigations into the effect on the spread of infection of irrigation of market gardens with untreated sewage. Interim reports, in addition to evidence from other parts of Germany where only treated sewage is used as fertilizer in irrigation fields, show that untreated sewage is responsible for transmitting Ascaris. Market gardening interests in the Darmstadt area are, however, opposed to sewage treatment since they feel it will lower the fertility of the soil and give poorer crops: the conflicting interests of hygiene and agriculture have not yet been reconciled. A.E.F.

554—Giornale Italiano di Chirurgia. Naples.

a. RUSSOLILLO, M., 1948.—"Cisti d'echinococco suppurata della borsa omentale." 4 (2), 91–98.

555—Giornale di Medicina. Palermo.

a. BUCCELLATO, G., 1948.—"La cisti da echinococco nell'infanzia; contributo casistico." 5 (3/4), 67–73.

556—Groenten en Fruit.

*a. BLOM, G., 1948.—[Root-knot of tomatoes.] 4, 68. [In Dutch.]
*b. BEEKENKAMP, G., 1948.—[Control of root nematodes by chemical means.] 4, 220. [In Dutch.]

557—Hospital. Rio de Janeiro.

a. FONSECA, L. C., 1948.—"Subnutrição e anemia na região noroeste do estado de São Paulo. (Sôbre a importância das carências alimentares na patogenia das anemias com especial referência á ancilostomótica.)" 33 (4), 559–610.
b. ALMEIDA PRADO, A. DE, 1948.—"A cirrose hepato-esplenomegálica por esquistosomíase de Manson—Pirajá da Silva." 34 (4), 469–477.

558—Indian Farming.

a. KUPPUSWAMY, P. B., 1948.—"'Pitto' and 'Gillar' in sheep and goats." 9 (2), 73–74.

(558a) A common disease responsible for heavy losses in sheep and goats in India, especially in Bihar, and locally named "Pitto" and "Gillar" has been shown to be due to infection with immature paramphistomes, which are spread by *Indoplanorbis exustus*. The characteristic symptoms are loss of appetite, mucous diarrhoea, extreme weakness, thick mucous discharge from the nostrils, and non-inflammatory swelling at the intermandibular space. Death occurs in a day or so after the onset of diarrhoea. Treatment is by 5–10 c.c. of a 10% solution of copper sulphate followed immediately by 1–3 c.c. of carbon tetrachloride in sheep and goats and 3-6 c.c. in cattle, with a saline purgative on the morning after. It should be given at least three times annually, at intervals of six weeks following the rains from the middle of September. R.T.L.

559—Indian Journal of Pediatrics.

a. CHATTERJI, D. N., 1948.—"Parasitic infestation in children." 15 (58), 57–64.

560—Indian Journal of Veterinary Science and Animal Husbandry.

a. MOHAN, R. N., 1948.—"Verminous pneumonia in animals in Bengal." 18 (1), 33–36.

(560a) Mohan reports on the occurrence of verminous broncho-pneumonia in cattle, sheep, goats and pigs in Bengal and refers briefly to the pathogenesis, clinical symptoms and the histopathology associated with *Dictyocaulus viviparus*, *D. filaria*, *Varestrongylus pneumonicus* and *Metastrongylus elongatus*, in their respective hosts. *M. elongatus* is stated to be well established in pigs in India. *D. filaria* and *V. pneumonicus* do occur occasionally in goats and sheep respectively. P.L.leR.

561—Indian Medical Journal.

a. BAROOAH, L. K., 1948.—"Hook worm disease. Five year's scheme." 42 (8), 195–196.

562—Irish Veterinary Journal.

a. KELLY, B. J. G., 1948.—"*Paramphistomum cervi* in cattle in Ireland." 2 (12), 241–242.

(562a) *Paramphistomum cervi* is now reported in sheep slaughtered at the Dublin Abattoir in 1945 and in three cows in 1948. The cows among which these three cases were noticed came in most cases from County Louth. R.T.L.

563—Italia Agricola.

a. ZAVATTARI, E., 1948.—"Il ciclo biologico del Distoma epatico." 85 (9), 499–502.

564—Jornada Médica. Buenos Aires.

a. PARODI, S. E. & ALCARAZ, R. A., 1948.—"La endemia ancylostomiásica en la Argentina." 2 (18), 620–626.

(564a) The incidence of hookworm disease in Argentina is highest in parts of the province of Corrientes where 98% of the population are affected; in Misiones the incidence is 80·2%, in Formosa 63·3% and in the Chaco 40%, with a decrease towards the Uruguay River. In the area near the Paraguay border approximately 95% of the infection is with *Necator americanus* and 5% with *Ancylostoma duodenale*, whereas in the Salta, Jujuy and Tucumán area and in Buenos Aires *A. duodenale* predominates. In parts of Paraguay 100% of the population are affected, 93·3% with *N. americanus* and 6·7% with *A. duodenale*. Resistance to the disease is much greater among the negro than among the white population. P.M.B.

565—Journal of Agriculture of Western Australia.

a. SMITH, W. P. C. & HARVEY, H. L., 1948.—"The control of root-knot or eelworm-gall disease by soil fumigation with D-D." 25 (3), 283–290.

(565a) In Western Australia *Heterodera marioni* is a serious pest in summer in the sandy soils around Perth and Geraldton. Smith & Harvey have found D-D mixture very effective, 29 gal. per acre being almost as good as twice that rate. Not only is the yield of root vegetables increased by up to 50% but also the proportion of first-grade roots (which may alone be marketable) is greatly increased. Details are given for the injection of 2·5 c.c., 6–8 inches deep, one foot apart in staggered rows, by teaspoon and funnel. A water seal is desirable and the ground should be dug after two weeks and planted after three. B.G.P.

566—Journal of the American Medical Association.

a. CAWSTON, F. G., 1948.—" Schistosomiasis." [Correction.] 136 (9), 636.

(566a) [This is a correction of a letter which appeared in *J. Amer. med. Ass.*, 1947, 135 (17), 1167.]

567—Journal of the American Medical Women's Association.

*a. BIRCH, C. L., 1948.—" Tropical medicine ; Platyhelminthes." 3 (1), 6–8.
*b. BIRCH, C. L., 1948.—" Tropical medicine ; Trematoda." 3 (1), 8–13.
*c. BIRCH, C. L., 1948.—" Helminth ova and arthropods as agents and vectors of disease." 3 (3), 93–99.

568—Journal of the Christian Medical Association of India, Burma and Ceylon.

a. CHACKO, M. P., 1948.—" Filariasis." 23 (5), 220–223.

569—Journal of the Egyptian Public Health Association.

a. AZIM, M. A. & WATSON, J. M., 1948.—" Comparative efficiency of various methods of infecting mice with *Bilharzia mansoni*." 24 (4), 121–140.

(569a) Azim & Watson review briefly some of the literature dealing with the various methods of infecting animals with cercariae of *Bilharzia* spp. and report on their efficiency for the production of a uniform level of infection of *B. mansoni* in mice. The methods employed by them in evaluating the efficiency of each were : partial immersion ; oral administration ; subcutaneous, gastric or intraperitoneal injections ; and the ring, vaseline ring and coverslip techniques. They conclude that the partial immersion of the mice in a known volume and depth of water containing a known number of cercariae is the most convenient and most satisfactory method. P.L.leR.

570—Journal of the Egyptian Veterinary Medical Society.

*a. EZZAT, M. A. E., 1948.—" Parasitic nodules in the small intestine of an Egyptian calf." 3 (2), 25–33.

571—Journal of the Indian Medical Association.

a. SANKARARAMAN, S., 1948.—" Some aspects of filariasis." 17 (10), 321–323.

(571a) Statistics are quoted to show that the introduction of drainage, the closing of unwanted wells and cesspools and the effective application of antimosquito measures, by gradually reducing *Culex fatigans*, has lessened the incidence of filariasis. The symptoms of early filariasis are partly allergic and partly due to inflammatory reaction. R.T.L.

572—Journal of the Japanese Medical Association.

*a. SAKAMAKI, Y., 1948.—[Enterostenosis due to *Ascaris lumbricoides*.] 22 (5), 158. [In Japanese.]

573—Journal of the Kansas Medical Society.

a. WALTERS, O. S., 1948.—" Creeping eruption in Kansas." 49 (5), 197–198.

(573a) Ten cases of creeping eruption were seen in Kansas by Walters during a two-year period. The treatments used were freezing with ethyl chloride, incision of the burrows, painting with mercresin and intramuscular injection of fouadin. Of the cases, eight occurred in the foot, one on the buttock and one on the vulva. R.T.L.

574—Journal of the Medical Association of Georgia.

a. McCROAN, Jr., J. E., 1948.—" Present status of hookworm problem in Georgia." 37, 434–435.

575—Journal of the Medical Association of the State of Alabama.

a. GILL, D. G., 1948.—"Protection against trichinosis." 18 (5), 133–136.

576—Journal of Neurosurgery. Springfield, Illinois.

a. OBRADOR, S. & URQUIZA, P., 1948.—"Two cases of cerebral abscess of unusual nature. Tuberculous abscess and suppurated hydatid cyst." 5 (6), 572–576.

577—Journal of Pathology and Bacteriology.

a. GAULT, E. W. & BALASUBRAHMANYAN, M., 1948.—"A case of cerebral cysticercosis." 60 (3), 505–506.

(577a) 213 cysts of *Taenia solium* were collected post mortem from a Hindu girl 14 years of age. These all occurred in the brain. No cysts were found in the eyes, muscles, or organs of the body. R.T.L.

578—Journal of the Philippine Medical Association.

a. PESIGAN, T. P., 1948.—"Schistosomiasis reconnaisance in northwestern Mindanao." 24 (9), 495–505.

(578a) Pesigan has discovered fresh endemic centres of schistosomiasis japonica in southern Occidental Misamis and eastern Zamboanga, especially in the barrios of the municipalities of Bonifacio and Tangub, Occidental Misamis, and in the barrios of the municipality of Aurora in Zamboanga, just south of the Occidental Misamis-Zamboanga boundary. He also found that the focus in Maranding, Lanao, reached as far as the barrios of Balili and Botadon. The incidence of the disease in Liloan was 17·4%. *Oncomelania quadrasi* were collected in the barrios of Santa Cruz, Liloan, Abaga, Usogan, Balukot, Tambulig, Maranding and Botadon. In the 304 stools examined during the survey, ova of *Ascaris lumbricoides* occurred in 70·6%, hookworm ova in 65·4% and *Trichuris trichiura* ova in 33·8%, *Schistosoma japonicum* eggs in 36·5%, heterophyid eggs and Taenia eggs in two cases each, *Hymenolepis nana* and *Paragonimus* in one case each. This article is illustrated by a map of the endemic areas around Panguil Bay, northwestern Mindanao, and a climate map of the Philippines. R.T.L.

579—Journal des Praticiens. Paris.

*a. ANON., 1948.—"Traitement de l'oxyurose." 62 (37), 450.

580—Journal of the Royal Agricultural Society of England.

a. SAMUEL, G. G., 1948.—"The potato crop. III. The control of potato diseases." 109, 118–127.

(580a) Root eelworm is potentially the most serious of all potato pests in Britain. The present certification of crops for stock seed in Scotland gives a fairly good measure of security. Completely safe seed is obtainable from Northern Ireland. The practice of washing seed is only suited to small quantities such as those used on gardens and allotments. Cropping at intervals of 4–5 years or longer is perhaps the most important precaution. In the absence of resistant varieties or satisfactory soil treatment, some measure of dispersion of potato growing to areas outside the main ware-growing districts as a permanent feature seems inevitable. R.T.L.

581—Journal of the Royal Army Veterinary Corps.

a. AHMED, S. M., 1948.—"Meat inspection in India Command." 19 (3), 72–75.

(581a) Between July and December 1946, meat inspection in the Indian Army revealed 17 cases of *Cysticercus bovis* in the 20 beef carcasses condemned out of 1,212 inspected, and *C. cellulosae* in 204 of 373 carcasses condemned out of 14,027 pigs inspected. Hydatid cysts and *Fasciola hepatica* were frequently observed. *F. gigantica* in cattle was less common. R.T.L.

582—Journal of the Royal Egyptian Medical Association.

a. TALAAT, S. M., 1948.—" An unusual case of bilharziasis. Intermittent painful swelling of the spleen and lymph glands. Case report." 31 (11), 882–883.
b. HALAWANI, A., BAZ, I., HAFEZ, A. & SHAWARBI, M. K., 1948.—" Treatment of tape worms with atebrine." 31 (12), 956–960.
c. TALAAT, S. M. & SHOAIB, S., 1948.—" The intensive treatment of schistosomiasis with tartar emetic." 31 (12), 961–963.

(582b) Atebrin administered to ten dogs with *Taenia multiceps, Dipylidium caninum* and roundworms, at the rate of 15 mg. per kg. body-weight expelled large numbers of the tapeworms and a few roundworms. No tapeworms were found post mortem one week later but roundworms were still present in large numbers. Of 53 human cases with *Taenia saginata* and *T. solium*, 34 who abstained from solid food for two days before treatment with atebrin at the same dose rate, 28 (82%) passed complete worms including the scolices. Of 19 cases in which fasting was not rigidly maintained only seven expelled complete worms. R.T.L.

(582c) Of ninety schistosomiasis cases treated with two injections, each of two grains, of tartar emetic on two successive days 80% were cured. The toxic effects were very mild. Renal disease is not a contra-indication provided urinary output is good. Cases of "decompensated heart" and cyanosis are unsuitable subjects. As children under 15 years of age excrete the drug rapidly three injections are advised. R.T.L.

583—Journal of the Royal Faculty of Medicine of Iraq.

a. SUHAIL, A. S., 1948.—" Case report : hydatid cysts of the lungs and the liver." 12 (2/3), 51–54.
b. ROGER, 1948.—" A case of hydatid cyst in the pleural cavity." 12 (4/5), 154–155.

584—Journal of the Society of Chemical Industry.

a. LUBATTI, O. F. & SMITH, B., 1948.—" Determination of fumigants. XX. Sorption of methyl bromide by potatoes." 67 (9), 347–354.

(584a) Lubatti & Smith carried out fumigation tests with methyl bromide to determine its efficacy for the control of the potato root eelworm, *Heterodera rostochiensis*. The effect of the following factors on the sorption of the chemical by potatoes was determined : concentration of the fumigant, period of exposure, size of tubers, temperature, maturity, variety and induced sprouting. A few experiments on the sorption of methyl bromide by light loamy soil were also carried out. T.G.

585—Journal of Tropical Medicine and Hygiene.

a. BARNES, G. T., 1948.—" An investigation into the causes of severe anaemia in Fiji." 51 (7), 133–139.

(585a) Of 49 cases of severe anaemia seen in the Colonial War Memorial Hospital, Fiji, over a period of 12 months, 20 were classed as hypochromic anaemia due to hookworm. They responded satisfactorily to iron. The number of worms recovered ranged from 41 to 506 and the haemoglobin percentage was from 31% to 58%. There was an absence of correlation between the degree of anaemia and the intensity of infection which indicated that other anaemia-producing factors were present. R.T.L.

586—Journal d'Urologie Médicale et Chirurgicale.

a. IMBERT, M., 1948.—" L'uretero-pyélographie dans les kystes hydatiques du rein." 54 (3/4), 143–147.

587—Journal of Urology.

a. BEACH, E. W., 1948.—" Genital manifestations in early filariasis." 59 (3), 371–375.

588—Jugoslovenski Veterinarski Glasnik.

a. KUTLEŠA, I., 1948.—"Prilog poznavanju epizootskog keratokonjunktivitisa goveda." 2 (2), 79–87. [German summary pp. 86–87.]

(588a) Kutleša examined the eyes of 54 cattle with eye symptoms and found *Thelazia rhodesii* in 8 cases of kerato-conjunctivitis and 10 cases of conjunctivitis. The parasites were also found in apparently healthy eyes. Treatment with 3% boric acid or 2% creolin improved the condition of the cattle. C.R.

589—Kinderärztliche Praxis.

a. OPITZ, H., 1948.—"Hepatitis epidemica—Gallengangsascaridiasis." 16 (1/2), 24–27.
b. STOLTE, K., 1948.—"Die Behandlung der Oxyuriasis." 16 (1/2), 31–32.

(589b) Stolte claims to have treated enterobiasis successfully by administering acorn coffee : the method was discovered accidentally when a child who was prescribed acorn coffee for an allergic complaint was found to have been cured of an enterobius infection. The treatment was then used both in private and hospital practice and the results are said to be good. [No details are given.] Acorn coffee is made in the same way as real coffee and is taken with milk and sugar : a little mondamin (maize starch) may be added to neutralize the tannin taste. Treatment lasts normally for two months and consists simply in the patient and his family—emphasis is laid on the importance of treating the whole household—taking acorn coffee whenever a drink is needed either during or between meals. Usually worms begin to be expelled a few days after treatment has begun and after six weeks no more worms are seen. The treatment must be combined with strict personal hygiene. A.E.F.

590—Kleintier-Zücht. Tierbörse.

*a. MEINERS, 1948.—"Spulwürmer bei jungen Hunden." 2 (28), 5.

591—Klinicheskaya Meditsina. Moscow.

a. NIEDERMAIR, T., 1948.—"Ein Beitrag zum Wurm-Ileus." 3 (19), 782–786.

592—Kosmos. Lwów.

*a. JANISZEWSKA, J., 1948.—[On some characters allowing to determine the stage and species of larvae of the genus *Contracaecum* Railliet-Henry 1912.] Ser. A, Rozpr. 65, 199–207.

593—Lancet.

a. AZIM, M. A., HALAWANI, A. & WATSON, J. M., 1948.—"The treatment of bilharziasis with miracil D." [Preliminary communication.] Year 1948, 1 (6506), 712–713.

(593a) Laboratory experiments on mice, gerbils and monkeys artificially infected with *Schistosoma mansoni* or *S. haematobium* showed that five doses daily or on alternate days, of 40–50 mg. of miracil D per kg. body-weight caused the disappearance of viable eggs and symptoms. At necropsy, only dead or disintegrated worms were found. Doses of less than 10 mg. per kg. were ineffective. In clinical trials with enteric-coated tablets, doses of up to 600 mg. every twelve hours produced substantial amelioration of the symptoms. Eggs decreased or disappeared for a time from the faeces and urine. Complete cures were rarely effected and in many instances eggs reappeared after three to eight weeks. R.T.L.

594—Landbouw. Buitenzorg.

a. DIKE, H., 1948.—"Nematologie." 20 (8), 319–322.
b. POOTJES, J. R., 1948.—"Methylbromide als fumigatiemiddel." 20 (9/10), 391–399.

(594a) In this semi-popular article Dike gives some account of plant-parasitic nematodes in general and deals more particularly with the bionomics of the root-knot

nematode *Heterodera marioni*. He briefly quotes some of the results of work carried out in Hawaii and in the U.S.A. on the use of D-D mixture for the control of *H. marioni*. T.G.

(594b) In a general review of methyl bromide as an insecticidal and rodenticidal fumigant for plant material and stored products, Pootjes briefly mentions its injection into soil, under a gas-tight cover, to control nematodes and other soil organisms. B.G.P.

595—Landbouwweekblad. Bloemfontein.

a. MÖNNIG, H. O., 1948.—"Belangrike wurmmiddel in die skaapboerdery." 30 (1514), 31, 59. [In Afrikaans.]

(595a) [This paper also appears in *Farmer's Weekly, Bloemfontein*, 75, p. 95. For abstract see No. 537a above.]

596—Landfrau.

*a. KRAUS, 1948.—"Behandlung des Geflügels bei Befall mit Luftröhrenwürmern." 3 (19/20), 23.

597—Lantbrukstidskrift för Dalarna.

a. BINGEFORS, S., 1948.—"Klövernematoden i Dalarna. Några iakttagelser från ett par studieresor sommaren 1947." No. 2, pp. 55–59.

(597a) In Kopparberg province about 50% of the arable land is under pasture. The main clover parasites are the fungus disease, *Sclerotinia trifoliorum*, and the clover nematode, the latter being little known as a pest outside south Sweden. A short survey is given of work on cold-resistant clover varieties in Dalarna. Samples of plants from poor fields at Avesta and Hedemora showed the presence of nematodes to a great extent. At Näs Kungsgård and Älvgården, however, the fields were relatively free from parasite attack. The results at Vassbo Agricultural School are interesting : in the first year the condition of the clover was very good in the spring, but small specks with very clear nematode symptoms could be seen in the autumn. Further up the River Dal strong nematode attack was also observed. The experiments carried out with chemical preparations for nematode control by the State Plant Protection Institute are of interest perhaps mostly where the nematodes occur to a limited extent. J.T.G.

598—Lantmannen. Stockholm.

a. BINGEFORS, S., 1948.—"Växtföljden och klövernematoden." 32 (46), 757–758.
b. NILSSON-LEISSNER, G., 1948.—"Humlelusern som gröngödslingsväxt." 32 (51), 847.

(598a) On a part of a field at Ultuna in central Sweden, red clover had been grown in 1935 to 1936 and in 1943 to 1944. On another part of the field red clover had been grown in 1935 to 1936 and in 1942. Red clover was sown again in 1948 but on the first mentioned part the ley was much damaged by eelworm in the autumn and was ploughed up. The other part was not damaged. S.B.

(598b) *Medicago lupulina* [black medick] is susceptible to stem eelworm, but less so than most red clover strains. It is to be expected that cultivation of *M. lupulina* will increase the number of parasites in the soil. S.B.

599—Laryngoscope.

a. MUNOZ-MacCORMICK, C. E., 1948.—"The injection treatment of esophageal varices due to Manson's schistosomiasis. Preliminary report." 58 (9), 992–1012.

(599a) Clinical details are given of a Puerto Rican case of advanced schistosomiasis mansoni with cirrhosis, splenomegaly and gastro-oesophageal varices. The varices were injected with 5% sodium morrhuate to control the haematemesis. As 25% of these advanced cases succumb to rupture of gastro-oesophageal varices, this new treatment may be useful by giving time to introduce measures for the treatment of the parasitic infection. R.T.L.

600—Leaflet. Texas Agricultural College Extension Service.

a. BANKS, W. C. & REGENBRECHT, E. M., 1948.—"The use of sodium fluoride for worming hogs." No. L-84, 4 pp.

601—Lékařské Listy. Brno.

a. BARTÁK, F., 1948.—"*Oxyuris vermicularis* 'bludné' cesty." 3 (16/17), 419–422. [English, French and Russian summaries p. 422.]

602—Lyon Médical.

a. BOUCHER, H., SCHNEIDER, J., SEIGNEURIN, PORTE, A.-P. & VITTORI, 1948.—"Trichinose avec manifestations allergiques très importantes. Essais thérapeutiques. (2.168 R.P., lomidine, néo-antergan.)" 180 (39), 637–641.

b. BOUCHER, H., PROTAR & LAFUMA, J., 1948.—"Syndrome de Loeffler multinodulaire et hémoptoïque d'origine ascaridienne." 180 (42), 689–692.

(602a) As trichinosis is rare in France, a detailed account is given of the symptoms which occurred in a German prisoner-of-war after eating 300 gm. of pork fat which a local farmer had given him while working in a village on the Isère. Treatment was ineffective. R.T.L.

(602b) Boucher *et al.* found that severe pulmonary symptoms, which had not yielded to other treatment, disappeared after the expulsion of a single Ascaris following treatment with an anthelmintic. S.W.

603—M.S.C. Veterinarian. Michigan State College.

*a. McMILLEN, W. N., LUECKE, R. W., HAWKINS, P. A., DUNNE, H. W. & THORP, F., 1948.—"Management, diseases, and parasites of swine." 8 (2), 81–82.

*b. LUECKE, R. W., HAWKINS, P. A., DUNNE, H. W., McMILLEN, W. N. & THORP, Jr., F., 1948.—"Management, diseases and parasites of swine. II." 8 (3), 122–124.

*c. HAWKINS, P. A., 1948.—"Two new parasiticides, benzene hexachloride and sodium fluoride." 8 (4), 134–137.

*d. HAWKINS, P. A., DUNNE, H. W., McMILLEN, W. N., THORP, Jr., F. & LUECKE, R. W., 1948.—"Management, diseases and parasites of swine. III." 8 (4), 152.

604—Maanedsskrift for Dyrlaeger.

a. EGEHØJ, J., 1948.—"Bidrag til kendskabet om distomatosens udbredelse og økonomiske betydning hos dansk slagtekvaeg." 59 (17), 454–457.

(604a) In Denmark *Fasciola hepatica* is common in slaughtered cattle coming from the area lying between Limfjord and the German border and in cattle from mid-Jutland. Of 21,509 adult cattle, 10·86% were infected. About 5·06 kg. of each infected liver was condemned representing a loss of 13·67 kr. per infected animal and a total loss of 31,940·87 kr. R.T.L.

605—Manitoba Medical Review.

a. WILLIAMS, T. H., 1948.—"*Enterobius* (*Oxyuris*) *vermicularis*, 'threadworm', 'pinworm'." 28 (8), 424–425.

606—Maroc Médical.

*a. TOULANT, P. & LARMANDÉ, A., 1948.—"Les kystes hydatiques de l'orbite en Algérie." 27 (282), 458–460.

607—Medical Bulletin of the European Command.

a. BURLINGAME, P. L., 1948.—"The incidence of intestinal parasites in troops in relation to the transmission of infectious hepatitis. A preliminary report." 5 (6), 22–25.

b. BURLINGAME, P. L., 1948.—"Findings on stool examinations of indigenous personnel in Army messes, 1946 to 1948. A preliminary report." 5 (6), 31.

c. BURLINGAME, P. L. & RESEMANN, G., 1948.—"Ascariasis in Kreis Darmstadt, Hessen, Germany. A preliminary report." 5 (7), 4–18.

(607a) Six hundred and sixty four American soldiers stationed in Germany were examined for intestinal parasites in an attempt to determine the amount of faecal contamination of food to which they were exposed. Of these, 7·5% harboured helminths. S.W.

(607b) Burlingame found that 44% of locally employed personnel handling food in U.S. Army messes in Germany harboured pathogenic organisms (protozoa and helminths). One thousand seven hundred and five persons were examined of whom 10% harboured *Ascaris lumbricoides*, 11% *Trichuris trichiura* and 3% *Enterobius vermicularis*. S.W.

(607c) Burlingame & Resemann have surveyed the incidence of ascariasis in 12 towns in Hessen, Germany. They describe the topography of the area and the methods of sewage irrigation used. Of 1,161 children between the ages of one and 15 years examined, 84% were infected: 39% had a light infection, 28% moderate, 13% heavy and 4% very heavy. Of 247 adults examined, 70% were infected. S.W.

608—Medicamenta. Madrid.

a. MUÑOZ CARDONA, P., 1948.—"Algunos aspectos de las parasitosis intestinales por *Ascaris lumbricoides*." 9 (147), 267–268.

609—Medicina. Revista Mexicana.

a. CALDERÓN RODRÍGUEZ, J., 1948.—"Algunos datos sobre antihelmínticos intestinales." 28 (569), 507–518.

(609a) Calderón Rodríguez gives a concise résumé of the anthelmintic substances which have been used in the treatment of intestinal infections based on a study of 57 bibliographical references. R.T.L.

610—Medicine and Laboratory Progress. Cairo.

*a. SAHEB, M., 1948.—"Antagonism of parasites towards tuberculosis." 9 (2), 23–26.

611—Medizinische Monatsschrift.

a. SCHEID, G., MENDHEIM, H. & SPENKUCH, M., 1948.—"Erfahrungen mit dem neuartigen Oxyurenmittel Fedoxyn." 2 (2), 44–45.
b. MENDHEIM, H. & SCHEID, G., 1948.—"Beiträge zur Diagnostik und Biologie der Oxyureninfektion. II. Mitteilung. Die Biologie von *Enterobius vermicularis* und ihre Bedeutung für die Bewertung der Verfahren zur Diagnose der Oxyuriasis." 2 (4/5), 147–155.
c. ULBRICH, W., 1948.—"Ueber den röntgenologischen Nachweis der Askariden." 2 (9), 357–359.

(611a) Scheid *et al.* have treated a series of cases of enterobiasis with "Fedoxyn", a new terpene preparation [no details are given as to formula, etc.]. A dose of 625 mg. for adults and correspondingly less [unspecified] for children was administered on four successive days followed on the fifth by a saline laxative. During treatment carbohydrate intake was restricted. Efficacy of treatment was judged by re-examination of the patients after a lapse of three weeks: this was based mainly on the disappearance, or otherwise, of subjective symptoms, although anal swabs and stools were examined. Patients are arranged in three groups: (i) "cured"; (ii) "improved"; and (iii) "not improved". Of 18 adults treated, nine are classed as (i), three as (ii), and two as (iii). Four did not present themselves for re-examination. Of 102 children, 38 are classed as (i), 27 as (ii), three as (iii) and 34 were not re-examined. The dosage was in all cases well tolerated: there were no side effects. A.E.F.

(611b) Mendheim & Scheid review in detail earlier work on the bionomics of *Enterobius vermicularis*. They have also studied the various techniques for diagnosing Enterobius infection and conclude that the cellophane swab is by far the most reliable

method, but they suggest certain modifications of the NIH swab technique. A piece of cellophane 10 to 15 sq. cm. in size is considered to be sufficient: the cellophane can be preserved in petri dishes or test tubes. Mendheim and Schmidt find it better not to examine the cellophane direct but to scrape off the material by means of a scalpel before putting it under the microscope. Of 182 children examined at a clinic 131 (71·4%) were found to be infected with Enterobius: in common with other workers Mendheim & Scheid found an increasing degree of infection with increasing age with a maximum at ten years. Girls were more heavily infected than boys. A.E.F.

612—Memorias. Congreso Mexicano de Medicina.

*a. HERNÁNDEZ MEJÍA, A., 1948.—"El tratamiento de la teniasis por las semillas de *Cucurbita maxima*." II, pp. 589–594.

613—Meriden Hospital Bulletin.

*a. NOBIL, M. K. & KATZENSTEIN, R., 1948.—"Death from trichinosis; a case report and review of autopsies." 1 (4), 17–24.

614—Military Surgeon.

a. MILLETT, G. W., 1948.—"Hookworm masked by complicating diseases in veterans." 103 (4), 279–283.

615—Minnesota Medicine.

a. ZIEVE, L. & CONLEY, R. H., 1948.—"Chronic schistosomiasis japonica diagnosed by rectal biopsy. Report of case." 31 (12), 1331–1335.

616—Miscellanea Entomologica.

*a. JOLIVET, P., 1948.—"Introduction à l'étude des gordiacés, vers parasites d'insectes." 45 (9), 83–90.

617—Monitore Zoologico Italiano.

a. PALUMBI, G., 1948.—"Particolarità strutturali della parete del tubo genitale femminile di *Ascaris megalocephala*." 56, Suppl. pp. 323–324.

b. PALUMBI, G., 1948.—"Struttura e connessioni delle cellule muscolari della parete del corpo di *Ascaris megalocephala*." 56, Suppl. pp. 325–326.

618—Monografias do Instituto Oswaldo Cruz.

a. PINTO, C. & ALMEIDA, A. F., 1948.—"Schistosomiasis mansoni no Brasil. (Doença dos caramujos ou chistosa.)" No. 5, 287 pp.

(618a) In this monograph on schistosomiasis Pinto & Almeida assemble from the original sources the main results of published investigations on the life-cycle, intermediate hosts, comparative pathology, human pathology, differential diagnosis, clinical types, epidemiology, geographical distribution, incidence in Brazil, and prophylaxis. The chapter on treatment is by Prof. H. Maciel. R.T.L.

619—Montpellier Médical.

a. MASSABUAU, BALMÈS, A., COURTY, CABANETTES & GUILLAUME, 1948.—"Suppuration pyo-gazeuse spontanée à pneumocoques d'un kyste hydatique du foie." [Summary of paper presented to the Société des Sciences Médicales et Biologiques de Montpellier et du Languedoc Méditerranéen, January 16, 1948.] 33–34 (5), 246–250.

620—Murrelet. Seattle.

a. McNEIL, C. W., 1948.—"A preliminary survey of parasites of eastern Washington waterfowl." 29 (1), 2–4.

621—Nachrichtenblatt für den Deutschen Pflanzenschutzdienst.

a. BECK, K., 1948.—"Ein Beitrag zur Kenntnis des Kartoffelnematoden, *Heterodera rostochiensis* Wr." New Series, **2** (10/11), 183–186.

(621a) Beck has studied the potato root eelworm *Heterodera rostochiensis* in fields in Thüringia. In one infested field where a few potato plants made secondary growth in late summer, the new roots were apparently free from cysts. Measurements of all stages of the eelworm fell within the range of other published figures: Beck observed the vulval aperture on brown cysts. Tomato seed was sown in September in freshly sterilized sand to which opened cysts from potato roots were added: at weekly intervals the seedlings were examined but white cysts were not found until the following May, after which all plants were attacked. Sugar-beet was tested in a similar way with *Heterodera rostochiensis* but was not attacked. M.T.F.

622—Natura. Milan.

a. ROMANINI, M. G., 1948.—"Ricerche sul fattore diffusore negli irudinei." **39** (3/4), 73–75.

623—Naturheilkunde. Berne.

*a. BOTTENBERG, H., 1948.—"Die Blutegelbehandlung." **45** (4), 40–44; (5), 51–54; (6), 64–66; (7), 77–79; (9), 104–106.

624—Naturwissenschaften. Berlin.

a. GÖNNERT, R., 1948.—"Zur Frage des Wirkungsmechanismus von Miracil." Year 1947, **34** (11), 347–348.

(624a) The changes occurring in *Schistosoma mansoni* during dosage of experimentally infected mice at 7 mg. miracil per 20 gm. mouse are described. The testes of a normal male *S. mansoni* are compared with those in the treated mice, which show a reduction in number of mitoses, the spermatocytes sometimes developing further and sometimes showing thickening of the chromatin and shrinkage of the nuclei; the testes are thus relatively richer in comma-shaped spermatozoa with simultaneous sharp reduction in cell content. Two days after treatment, normal spermatogenesis nuclei are rare among preponderating pycnotic nuclei, normal spermatogonia and spermatozoa. After 4–5 days the size of the testes is notably reduced, their surface is shrivelled and the poverty in cells very significant; the spermatogonia and spermatozoa still appear normal. Similar changes in the ovary and vitellaria of the female lead to a reduction and finally to a complete failure of maturing cells. The effect of miracil as a mitotic poison is considered to be a direct injury to the nuclei, which is expressed as an inhibition of mitosis. E.M.S.

625—Natuurwetenschappelijke Studiekring voor Suriname en Curaçao.

a. DRESSCHER, T. G. N. & ENGEL, H., 1948.—"Studies on the fauna of Curaçao, Aruba, Bonaire and the Venezuelan islands: No. 15. Hirudinea of the genus *Helobdella* from Curaçao and Venezuela." No. 5, pp. 87–88.

(625a) Leeches found at temperatures of 28°–31°C. showed affinities to both *Helobdella scutifera* and *H. stagnalis* and this tends to confirm the identity of these two species. Other specimens found at temperatures of 29°–32°C. are tentatively identified as *H. fusca.* P.M.B.

626—Neue Mitteilungen für die Landwirtschaft. Hanover.

a. GOFFART, H., 1948.—"Nematoden und Dürre." **3**, 86.

(626a) Cereals such as rye and barley growing in light soil may, under drought conditions, show signs of unthriftiness in poor growth, crinkled and withered leaf tips and premature earing-out with scanty grain. Goffart points out that practically the same poor

growth signs may be found in seasons of normal rainfall, the roots of affected plants also showing a spongy puckered appearance with swollen, club-shaped tips. These symptoms are associated with root invasion by the meadow nematode, *Pratylenchus pratensis*, and Goffart deals with the pathogenic action of the parasites. He also reports their attack on leek roots giving rise to crop reduction. T.G.

627—Nordisk Jordbrugsforskning.

a. ÅKERBERG, E., 1948.—"Resistens mot klöverålen, *Ditylenchus dipsaci*." [Summary of paper presented at Nordiske Jordbrugsforskeres Forenings 7th Congress, Oslo, July 1947.] Year 1948, No. 1/3, p. 591.

(627a) Åkerberg gives a short summary of a paper on eelworm resistance of clover, read at a congress in Oslo in 1947. Further details are given by Åkerberg, Bingefors & Lesins in *Sverig. Utsädesfören. Tidskr.*, 1947, **57** (3), 200–229 [for abstract see Helm. Abs., **16**, No. 336a]. S.B.

628—Norsk Pelsdyrblad.

a. MORK, P., 1948.—"Eit ormemiddel som fleire brude prøve." 22, 199–200.

(628a) Mork has obtained very good results with bark and leaves of aspen given to foxes as an anthelmintic remedy. S.B.

629—Norsk Veterinaer-Tidsskrift.

a. IVERSEN, M., 1948.—"Trikinosens utbredelse og bekjempelse i Norge." **60** (8), 303–309. [English summary pp. 308–309.]

b. EIELAND, E,. 1948.—"Trikinose hos isbjørn." **60** (11), 414–415. [English summary p. 415.]

(629a) Iversen has found that 2·5% of fur animals examined in Norway are infected with *Trichinella spiralis*. It occurred in 7·8% of 3,806 mink, 22·4% of 125 wild foxes, 17% of 41 cats, 0·2% of 1,295 dogs, 39% of 84 rats and 2 out of 3 badgers examined between 1941 and 1946. The annual incidence in rats during the years 1940 to 1947 is tabulated and shows a variation in rate of infection between 8·5% and 18·1%. The official regulations concerning trichinosis are summarized. R.T.L.

(629b) Eieland has found *Trichinella spiralis* cysts in two polar bears from Svalbard. No cysts were found in several finback and sperm whales. R.T.L.

630—Northwest Medicine. Seattle.

a. CHIPPS, H. D., 1948.—"Oxyurids in the appendix." 47 (9), 662–665.

631—Notas Agronomicas. Estación Agrícola Experimental de Palmira, República de Colombia.

a. CARDEÑOSA BARRIGA, R., 1948.—"Nuevo aspecto de las investigaciones sobre la 'rayadilla' del plátano." **1** (3), 15–29. [English summary p. 27.]

(631a) Cardeñosa Barriga has investigated the "rayadilla" disease of plantains (*Musa paradisiaca* L.) which resembles heart-rot of banana (*Musa sapientum* L.). In the roots of affected plants parasitic nematodes were found which were identified by Dr. G. Steiner as *Heterodera marioni* and *Tylenchus similis*. When diseased roots were removed from affected plants and the latter were transplanted into clean soil they recovered completely and showed no further signs of disease. T.G.

632—Notas del Museo de La Plata.

a RINGUELET, R., 1948.—"Notas sobre hirudíneos neotropicales. IV. Una cuestión de nomenclatura: *Liostoma* versus *Cylicobdella*." 13 (Zoología No. 109), 185–190.

b. RINGUELET, R., 1948.—"Notas sobre hirudíneos neotropicales. V. Especies de la República del Paraguay." **13** (Zoología No. 113), 213–244.

633—Nurseryman and Seedsman. London.

*a. ALLERTON, F. W., 1948.—"Sure control of chrysanthemum eelworm." 107, 1688–1690.

634—Paediatria Danubiana. Budapest.

a. VOLTAY, B. & GEDEON, K., 1948.—"Tüdöechinococcus operált esete." [An operated case of pulmonary echinococcosis.] 4, 46–52. [English, French, German & Russian summaries pp. 51–52.]

b. VÉGHELYI, P. V., MAKARA, G. G. & FLAMM, M., 1948.—"Trichostrongylus infestation and extrapyramidal lesion. Exogenous Wilson's disease?" 4, 196–207. [French, German, Hungarian & Russian summaries pp. 204–207.]

(634b) The first Hungarian case of infection with *Trichostrongylus vitrinus* was observed in 1936 and is now reported. It occurred in a seven-year-old girl who was also suffering from a nervous condition thought to be Wilson's disease. Treatment over a period of 16 months with carbon tetrachloride, thymol and hexylresorcinol removed numbers of worms, but reinfection took place. The possible connection between the two conditions could not be proved. Twenty-six further cases of *Trichostrongylus* infection in children were found in 1942. P.M.B.

635—Pediatría de las Américas. Mexico.

a. MONNIER MILLOTTE, A. & TREVIÑO VILLASEÑOR, A., 1948.—"Nueva modalidad en el empleo del violeta de genciana para el tratamiento de la oxiuriasis." 6 (4), 223–225.

(635a) A solution containing 1 gm. of gentian violet in 20 c.c. of 90% alcohol and 100 c.c. of distilled water is recommended for the treatment of enterobiasis. When applied to the perianal region three or four times daily for eight days it had 97% efficacy. The remaining 3% yielded to a second course of treatment. P.M.B.

636—Pharmazie. Berlin.

a. ERHARDT, A., 1948.—"Die chemotherapeutische Prüfung von Wurmmitteln." 3 (2), 49–58.

b. POETHKE, W., 1948.—"Sind die Samen der Kornrade (*Agrostemma githago*) als Wurmmittel verwendbar?" 3 (6), 287–288.

637—Plant Disease Leaflet. Department of Agriculture, New South Wales.

a. ANON., 1948.—"Root knot or root gall." No. 38, 5 pp.

b. ANON., 1948.—"Stem nematode disease of lucerne." No. 58, 4 pp.

(637a) This is a brief account of root-knot disease caused by *Heterodera marioni*. A comprehensive section on control measures includes instructions for applying chloropicrin, D-D, methyl bromide and carbon disulphide as soil fumigants. M.T.F.

(637b) This leaflet gives a brief description of stem eelworm disease in lucerne, of which it is a serious pest in New South Wales. The life-history of the eelworm is sketched shortly, and various ways by which the disease is spread are mentioned; these include spread through infested seed. Treatment with warm water for 15 minutes at 118°F. to 120°F. will control the adhering nematodes. The need for clean husbandry and proper crop rotations is stressed. J.B.G.

638—Policlinico (Sezione Pratica). Rome.

a. POMPILI, M., 1948.—"Cisti di echinococco primitiva solitaria dell'utero." 55 (2), 37–39.

b. BOSCARDI, F., 1948.—"Moderna terapia dell'ossiuriosi." 55 (27), 813–815.

c. BIANCO, I., 1948.—"Su di un caso di cisti da echinococco del polmone a rapido sviluppo." 55 (31), 941–943.

639—Polski Tygodnik Lekarski. Warsaw.

a. NIELUBOWICZ, J., 1948.—" W sprawie bąblowca wątroby." [On hydatid cysts of the liver.] 3 (3), 73–78. [In Polish : English summary p. 17*.]

b. GOLDSCHMIED, A., 1948.—" Zastosowanie lekkich stanów hipoglikemicznych u chorych na włośnicę." 3 (33/34), 978–979.

(639b) By producing hypoglycaemia in three women patients suffering from a four-week-old Trichinella infection the acute pains usually associated with trichinosis were relieved. C.R.

640—Popular Gardening. London.

*a. WHITEHEAD, S. B., 1948.—" Beware of potato eelworm." 50, 237, viii.

641—Poultry Science.

a. KERR, K. B., 1948.—" Hexachlorophene as an agent for the removal of *Raillietina cesticillus*." 27 (6), 781–788.

b. TODD, A. C., 1948.—" Thyroactive iodocasein and thiouracil in the diet, and growth of parasitized chicks." 27 (6), 818–821.

(641a) Hexachlorophene (= bis(2-hydroxy-3,5,6-trichlorophenyl) methane) at doses of 25–50 mg. per kg. body-weight is shown to be highly efficient in removing *Raillietina cesticillus* from poultry experimentally infected with cysticercoids from flour beetles (*Tribolium* sp.) or by feeding with infected beetles. It has no anthelmintic effect on *Ascaridia galli* or *Heterakis gallinae*. Medication was usually by hard gelatin capsules pushed into the oesophagus. At 200 mg. per kg. body-weight the drug is toxic but as the therapeutic index is about 7 it can be safely used in the field. The outstanding symptom of acute poisoning is an increase in the respiratory rate. Egg production was markedly reduced from the third to the seventh day after treatment. R.T.L.

(641b) Todd cites experiments which show that the mild hyperthyroid condition induced by adding 0·04% Protamone (thyro-active iodocasein) to the basal ration helped poultry to overcome the effects of experimental infections with *Ascaridia galli* and *Heterakis gallinae*, but did not enable parasitized chicks to maintain a rate of growth equal to that of non-infected birds. R.T.L.

642—Prensa Médica Argentina.

a. NARIO, C. V., 1948.—" Cavernas hidatídicas del hígado con dehiscencia bronquial." 35, 1282–1289.

643—Press Bulletin. Florida Agricultural Experiment Station.

a. KINCAID, R. R. & VOLK, G. M., 1948.—" Soil fumigation for cigar-wrapper tobacco fields." No. 655, 4 pp.

(643a) Kincaid & Volk give practical details for the fumigation of cigar-wrapper tobacco fields, using either D-D mixture at 20 gal. per acre or Dowfume W-40 at 15 gal. per acre. Injection is conveniently carried out in winter, 6 inches deep at 12-inch spacings in soil well cultivated to 8 inches deep. Nematicidal effects of injection must be differentiated from those due to an increase of ammonia nitrogen in the soil. Root-knot is better controlled than eelworm root rot. B.G.P.

644—Primary Producer. Cape Town.

*a. MÖNNIG, H. O., 1948.—" The use of phenothiazine against worms in sheep." 24 (31), 20.

645—Proceedings of the Alumni Association of the King Edward VII College of Medicine, Singapore.

a. SANDOSHAM, A. A., 1948.—" Some parasitological facts of significance to the clinician in Malaya." 1 (1), 45–52.

646—Proceedings of the American Society for Horticultural Science.

a. BURGIS, D. S. & BECKENBACH, J. R., 1948.—"Herbicides for control of weeds in vegetable seedbeds also control root-knot." 52, 461–463.
b. MULLISON, W. R., 1948.—"Nematode control in nutriculture." 52, 467–470.

(646a) Burgis & Beckenbach have tested the nematicidal effects of three herbicides against root-knot in both a light and a heavy soil, using tomato and celery plants as indicators. A 3 to 1 mixture of Uramon and cyanamide was used at 1·5 lb. per sq. yard on the heavy soil and 0·5 lb. on the light, seedlings being planted both after four and after ten weeks. Chloropicrin was used at 2·5 c.c. per sq. foot, with plantings after two and eight weeks. The ammonium salt of 2,4-dichlorophenoxyacetic acid (2,4-D) was used at the equivalent of 10 lb. per acre of free 2,4-D, with plantings after four and ten weeks. Counts of root galls showed that all three substances reduced root-knot in the heavy soil, but not in the light soil, and that while the effect of chloropicrin is fully developed in the first planting, that of the other two requires a longer interval. B.G.P.

(646b) In the culture of plants in sand with added nutrient solutions, root-knot has become a major pest. Mullison has used ethylene dibromide, D-D mixture and formalin, the first two made water-dispersible by mixing with an equal volume of Tween 80, an emulsifier. Formalin gave no control at up to 6,000 p.p.m. by weight of formaldehyde. At 625 p.p.m., D-D mixture gave complete control and ethylene dibromide almost complete control, when infested pots of sand were stood for 24 hours in the solution and then flushed with water. Reducing the concentration, and the emulsifier to 20% by weight, D-D was fully effective in 72 hours at 300 p.p.m. and in 24 hours at 600 p.p.m., whereas ethylene dibromide was not fully effective even in 72 hours at 600 p.p.m. B.G.P.

647—Proceedings. American Society of Sugar Beet Technologists, General Meeting.

a. THORNE, G. & JENSEN, V., 1948.—"Soil fumigation work in 1947." 5th (1948), 506–508.
b. LEAVITT, F. H., 1948.—"Observations on the mechanics of soil fumigation." 5th (1948), 509–513.

(647a) Thorne & Jensen report on the fumigation of some 700 acres of sugar-beet land in the intermountain region of Utah in 1947, to control *Heterodera schachtii*. With a few exceptions where heavy rain flooded the fields, fumigation led to satisfactory yields well above the district average of 14·5 tons per acre for untreated land. Reasonable yields were obtained when beet followed beet, with re-fumigation with D-D mixture at 25 gal. per acre, but in one case even 50 gal. per acre gave no appreciable yield in the second year with no re-fumigation. No difference was found between Shell D-D and Dowfume N, each at 25 gal. per acre. Yields after D-D fumigation were comparable with those following a long rotation, but the good effects of the latter did not extend into a second year. B.G.P.

(647b) Leavitt discusses in some detail the physical properties of soils in relation to fumigation with D-D mixture. Pore space varies from 35% in a coarse sand to 53% for a clay; the corresponding surface areas of the soil particles per cu. ft. of soil are about 8,000 and 174,000 sq. ft. respectively. Proper cultivation prior to injection ensures a maximum pore space. In a sandy soil with moisture suitable for germination (12%), and a clay soil in a similar condition (25%), it happens that the residual air space is about the same, 9,000 cu. ft. per acre-foot. Temperature changes bring about air changes (breathing) in the upper soil. D-D at 20 gal. per acre represents, after vaporization, some 660 cu. ft. or 6% of the pore space in the upper foot of soil. Plant residues lead to a too rapid diffusion of fumigant along their surface. These are some of the factors which lead to the usual recommendation of a soil well tilled to 10 inches deep, moisture ideal for germination, temperature between 35°F. and 85°F., a minimum of plant residues, injection at not more than 12 inch spacing and 6–8 inches deep, with sealing by a dragged iron bar. B.G.P.

648—Proceedings of the Florida State Horticultural Society.

a. SUIT, R. F., 1948.—"Spreading decline of citrus in Florida." Year 1947, **60**, 17–23.
b. BICKERTON, J. M., 1948.—"Observations of certain factors governing efficacy of soil fumigants." Year 1947, **60**, 114–116.

(648a) Suit states that in Florida, next to "foot rot" and root rot, "spreading decline" is the most important source of citrus tree decline (orange, tangerine, grapefruit). After failing to find pathogenic fungi or to transmit a virus by grafting methods, it has been concluded that *Tylenchulus semi-penetrans* (present on the roots in all affected groves) is the main cause. A peculiar feature of the disease, not marked in the corresponding "slow decline" in California and elsewhere, is the gradual spread over a period of years from one or two trees to all the trees of a block. There is a scarcity of fibrous rootlets, those present being distorted, stunted, thickened, and readily shedding their cortex. Affected trees do not die but show sparse foliage which quickly wilts in dry weather, and lack of fruit. Since the eelworm can survive three years in the absence of citrus and can occur 6 ft. deep, control is difficult. Severe pruning, various root injections, and soil treatment with seven different inorganic compounds were found to be useless. D-D at 2·0–5·0 c.c. per sq. ft. killed the eelworms down to 2 ft. deep but also killed the trees. Ethylene dibromide was found less phytocidal but also less effective. B.G.P.

(648b) Bickerton briefly discusses factors influencing the efficacy of such soil fumigants as chloropicrin, methyl bromide, D-D and ethylene dibromide. Spacing can be wider in sandy soils. Depth of injection should be as little as is compatible with retaining the fumigant in the soil, but must be increased in sandy soils, at high temperatures, and at low moisture content. Penetration of soil is affected by a wide variety of factors ; penetration of organic debris by chloropicrin is poor. Soil temperatures should be between 50°F. and 80°F., with the lower temperatures for fumigants of lower boiling-point. Soil moisture should be greater at higher temperatures and in sandier soils. Clay and muck soils require higher dosages, shallower injection in a looser tilth at lower moisture and higher temperatures, and a longer period for aeration. B.G.P.

649—Proceedings of the Indian Science Congress.

a. BHALERAO, G. D., 1948.—"Applied helminthology, its past and future in India." [Presidential address to the Section of Zoology and Entomology.] 34th (1947), Part II, Sect. 7, pp. 1–20.
b. IRANI, K. R., PHALNIKAR, N. L. & NARGUND, K. S., 1948.—"Synthetic anthelmintics : synthesis of γ-5-alkyl-2 ; 4-dimethoxyphenyl butyrolactones." [Abstract.] 34th (1947), Part III, pp. 109–110.
c. IRANI, K. R., PHALNIKAR, N. L. & NARGUND, K. S., 1948.—"Synthetic anthelmintics : synthesis of γ-2 : 4-dialkoxy-phenyl butyrolactones." [Abstract.] 34th (1947), Part III, p. 110.
d. IRANI, K. R., PHALNIKAR, N. L. & NARGUND, K. S., 1948.—"Synthetic anthelmintics : synthesis of γ-5-alkyl-2-methoxyphenyl butyrolactones." [Abstract.] 34th (1947), Part III, p. 110.
e. IRANI, K. R., PHALNIKAR, N. L. & NARGUND, K. S., 1948.—"Synthetic anthelmintics. Synthesis of γ-3-alkyl-4-methoxyphenyl butyrolactones." [Abstract.] 34th (1947), Part III, p. 110.
f. IRANI, R. N., PHALNIKAR, N. L. & NARGUND, K. S., 1948.—"*In vitro* observations on the anthelmintic action of some synthetic lactones." [Abstract.] 34th (1947), Part III, p. 129.
g. AMIN, M., 1948.—"Conception of paruterine organs in the cestode genus *Avitellina*." [Abstract.] 34th (1947), Part III, p. 172.
h. DEO, P. G., 1948.—"On the life-history of *Trichuris ovis*, with experiments on the embryonation and extra-corporeal hatching of the eggs of *Trichuris* sp." [Abstract.] 34th (1947), Part III, p. 173.
i. KAW, B. L., 1948.—"New host records of *Pomphorhynchus kashmirensis*." [Abstract.] 34th (1947), Part III, p. 173.
j. SRIVASTAVA, H. D., 1948.—"Some trematodes parasitic in Indian marine foodfishes and tortoise." [Abstract.] 34th (1947), Part III, pp. 173–174.
k. SRIVASTAVA, H. D., 1948.—"Extermination of aquatic snails as a measure in the control of trematode infection." [Abstract.] 34th (1947), Part III, p. 174.
l. SRIVASTAVA, H. D., 1948.—"On the pathogenicity of *Gastrothylax crumenifer*, the common pouched amphistome of ruminants in India." [Abstract.] 34th (1947), Part III, p. 174.
m. SRIVASTAVA, H. D., 1948.—"A unique digenetic trematode referable to a new family." [Abstract.] 34th (1947), Part III, pp. 174—175.

n. CHATTERJI, P. N., 1948.—" On a new species of the genus *Platynotrema* Nicoll, 1914 with a note on the synonymity with the genus *Euparadistomum* Tubangui, 1931." [Abstract.] 34th (1947), Part III, p. 175.
o. CHATTERJI, P. N., 1948.—" On some heterophyd trematodes of the genus *Haplorchis* Looss, 1899." [Abstract.] 34th (1947), Part III, p. 175.
p. QUTUBUDDIN, M., 1948.—" The epidemiology of filariasis in the central portion of H.E.H. The Nizam's Dominions. Part II." [Abstract.] 34th (1947), Part III, p. 200.

(649a) In this presidential address Bhalerao summarizes the work accomplished in India on helminths affecting man, domesticated animals and plants of economic importance, and suggests future lines of investigation. He also refers to the need for further study of the role of helminths in connection with the development of the pearl industry. The paper concludes with a comprehensive list of references. R.T.L.

(649f) The abstract states that four butyrolactones were tested for anthelmintic action by studying their toxicity to earthworms. Sollomann's immersion method was used, but no results are given. R.T.L.

(649g) By studying entire specimens, Amin has traced the development of the paruterine organ of *Avitellina*, which is distinct from the uterus although it develops in connection with it. He is of the opinion that previous workers have regarded the uterus as the paruterine organ and the developing paruterine organ as only part of the uterus. This misinterpretation has caused confusion in the taxonomy as most of the species of *Avitellina* are characterized mainly by the form of the so-called paruterine organs. R.T.L.

(649h) A kid experimentally infected with *Trichuris ovis* had 362 worms in the small intestine, 85 in the large intestine and 466 in the caecum when it died 61 days later. All the worms were immature. A second kid showed 135 mature worms in the caecum when slaughtered 136 days after infection. The control was negative. Trichuris eggs took approximately the same time to embryonate in soil as in water cultures. About 4% of the eggs hatched when treated with 5 c.c. of artificial gastric juice for 20 hours followed by 5 c.c. of artificial pancreatic juice for 24 hours at 99°F. to 98°F. but they failed to hatch even after three weeks in artificial gastric juice or artificial pancreatic juice or in saturated salt solution, sugar solution, or dilute potassium permanganate. R.T.L.

(649i) *Pomphorhynchus kashmirensis*, now reported from the fishes *Schisothorax esocinus* and *S. niger*, shows variations from the type specimen in the body dimensions and slight variation in the number of hooks in the longitudinal rows. There are 13–14 in each row in the specimens from *S. niger*. In the male specimen obtained from *S. esocinus* the proboscis hooks are in 16 longitudinal rows with 13 in each row. There are six prostate glands. The lemnisci do not descend into the trunk cavity. The neck region is comparatively long and the "bulla" is less developed. R.T.L.

(649j) Of two new trematodes from Indian marine food fishes, one [unnamed] belongs to *Pleorchis*, the other, which is briefly described as *Folliorchis lateroporus* n.g., n.sp., belongs to the Allocreadiidae. Two [unnamed] species were obtained from a tortoise. They belong to the genera *Kaurma* and *Styphlodora* and were described in the paper but not in the published abstract. R.T.L.

(649k) Srivastava has studied the effect on the snail population, of removing surface vegetation from a perennial pond fed by rain-water from a fairly wide area. The pond was full of water hyacinth and other floating weeds and contained billions of snails. Since surface vegetation was removed two years ago, the pond has remained surprisingly free from snails. It is suggested that this method might prove an effective means of controlling trematode infections, if applied to the banks and surfaces of ponds and rivers. R.T.L.

(649 l) A healthy goat which received 20,000 encysted cercariae of *Gastrothylax crumenifer* died two months later of acute paramphistomiasis. Its weight had fallen from

40 lb. to 28 lb. The symptoms were general unthriftiness, persistent foetid diarrhoea, marked emaciation and submaxillary oedema. The faeces were often tinged with blood and contained large numbers of immature worms. R.T.L.

(649m) A new family Bhaleraoiidae is made for a trematode *Bhaleraoia piscicola* n.g., n.sp., found in the gut of a "marine host" at Karachi. All the organs connected with reproduction lie in front of the acetabulum, which is close behind the middle of the body length. The intestinal caeca open through narrow tubes into the sides of the excretory bladder, and the vitellaria are long, tubular and intricately coiled. R.T.L.

(649n) *Euparadistomum* resembles *Platynotrema* so closely that its retention is unjustifiable. *E. varani* and *E. cerivoulae* are therefore transferred to *Platynotrema*. A new species of *Platynotrema* has been found by Chatterji in the gall-bladder of *Upupa epops orientalis* near Gorukhpur, but is neither named nor described in this abstract. R.T.L.

(649o) Chatterji has come to the conclusion that *Haplorchis* and *Monorchitrema* are synonymous. In India *Haplorchis* is represented by five species, all from fishes; two more species have been collected from hosts other than fishes, namely *Haplorchis butei* n.sp. from *Buteo rufinus rufinus*, and *H. tagoreai* n.sp. from *Canis domesticus*. It is stated that short descriptions of these are given in the full paper, with a comparative table of important characters of all the species of the genus [but as no differential diagnosis appears in this abstract the new names have no nomenclatural standing]. R.T.L.

(649p) In a study of the epidemiology of filariasis in the talugs Siddipet and Medak of the Medak district of Hyderabad, 1,700 blood films taken from 22 villages showed microfilariae in 144 instances, i.e. 8·47%. *Culex fatigans* was ascertained to be the vector. The predominant infection was *Wuchereria bancrofti*. Microfilariae were much more common in apparently healthy individuals than in more obvious cases of infection. R.T.L.

650—Proceedings of the Institute of Medicine of Chicago.

a. MURRAY, D. E., 1948.—"Genito-urinary aspects of early filariasis." [Abstract of Report presented at the Regular Meeting of the Chicago Urological Society, December 4, 1947.] **17** (5), 118–119.

651—Proceedings of the Iowa Academy of Science.

a. HEMENWAY, M., 1948.—"Studies on excystment of *Clinostomum* metacercariae by use of artificial digestion." **55**, 375–381.
b. MATHERS, C. K., 1948.—"The leeches of the Okoboji region." **55**, 397–425.
c. McINTOSH, L., 1948.—"*Leucochloridium* sporocysts from the Okoboji region." **55**, 427–428.

(651a) It would appear that a slightly acid environment is necessary to activate the excystment of *Clinostomum* metacercariae collected from frogs. The first cyst wall is digested away by a pepsin-HCl combination without producing any activity. The presence of digestive enzymes and of products of digestion stimulate the metacercaria to break through the membrane of the last cyst wall and escape. R.T.L.

(651b) Mathers lists 22 species of Hirudinea found in the Okoboji Lake region, Iowa, and under each species gives short notes on (i) field identification, (ii) distinguishing features, (iii) colouration, (iv) eyes, (v) size and shape, (vi) feeding habits, (vii) reproduction, (viii) habitat and (ix) frequency. A field identification key and a series of drawings showing the outstanding characteristics of individual species are appended. R.T.L.

(651c) *Leucochloridium* sporocysts were observed by McIntosh in *Succinea retusa* on the shore of the Silver Lake, Dickinson County, Iowa. R.T.L.

652—Proceedings of the Lenin Academy of Agricultural Sciences of U.S.S.R.

a. SHUMAKOVICH, E. E., 1948.—[Treatment of lung disease in sheep caused by *Muellerius capillaris*.] 13 (3), 40–43. [In Russian.]

(652a) Shumakovich found that subcutaneous and intramuscular injections of a 1% solution of emetine hydrochloride in total dose of 0·008–0·009 [gm.] per kg. body-weight (0·003 [gm.] per kg. body-weight given three times or 0·002 [gm.] four times, with intervals of 1–3 days) appears to be highly effective against *Muellerius capillaris* in sheep; the number of larvae in faeces is reduced by 97–98%. Treatment repeated 25 days later, 2 injections with dose of 0·002 [gm.] per kg. body-weight, is 100% effective. Subcutaneous injections of water solutions of emetine hydrochloride produce a local dermatitis which disappears in 2–3 weeks. Intramuscular injections do not cause local reaction. Histological examinations of the parasites showed that the nuclear elements in the cells are destroyed by this drug but there were no pathological reactions due to the drug in the parenchymatous organs of the sheep. In those animals in which *Muellerius* caused secondary infections the treatment was not effective. The author recommends that the examination of faeces for larvae to check the efficacy of the treatment should be done 8–10 days after the last dose. He also reports that " aminarson " and " sulfazon " produced no effect. C.R.

653—Proceedings of the Louisiana Academy of Science.

a. WEXLER, R. M., 1948.—" Intestinal parasitism in colored school children of East Baton Rouge parish : a preliminary report." 11, 30.

654—Proceedings and Transactions of the Texas Academy of Science.

a. VINCENT, I., 1948.—" Studies on the endoparasites of the Texas horned lizard, *Phrynosoma cornutum* (Harlan)." Year 1946, 30, 250–252.

(654a) In the horned lizard of Texas, *Phrynosoma cornutum*, the occurrence of *Diochetos phrynosomatis*, *Physaloptera phrynosoma* and, rarely, an unnamed acanthocephalan are recorded. R.T.L.

655—Progress Report. Texas Agricultural Experiment Station.

a. TURK, R. D., JONES, J. H. & ROBERTS, J. E., 1948.—" Treating feedlot steers for intestinal parasites." No. 1131, 2 pp. [Mimeographed.]

(655a) Turk, Jones & Roberts record their findings in the case of groups, treated and not treated for helminths, of feedlot yearling steers from known worm-infested pastures. They state that clinical cases of helminthiasis in weaned steer calves demanded treatment, and that drylot fattening rations alone did not restore vitality. Their observations, based on gains in body-weight, dressed carcass weight, grade of carcass and number of worms found in the duodenum, suggest that animals in poor condition off known worm-infested pastures should be treated prior to feeding drylot fattening rations. There are indications that treatment with phenothiazine followed 15 days later by "cunic" mixture (copper sulphate and nicotine sulphate), gave better results than either phenothiazine or "cunic" alone. P.L.leR.

656—Publicación. Escuela de Veterinaria. Universidad de Buenos Aires.

a. GALOFRE, E. J. & MORINI, E. G., 1948.—" La fenotiacina administrada a altas dosis en los equinos." Year 1947, No. 2, 39 pp. [English summary pp. 37–39.]

(656a) No serious symptoms or deaths occurred in eight horses receiving phenothiazine in doses of 600 gm. and 1,000 gm., i.e. 20 to 30 times that normally prescribed. There was slight depression, aversion to food and lowering of vitality which recurred on the 7th and 9th days, when signs of anaemia first appeared. In all the treated animals the number of red cells was considerably reduced, in some cases to 50% or less. In some cases complete recovery was delayed for two months. R.T.L.

657—Publications de la Faculté des Sciences de l'Université Masaryk.

a. JEDLIČKA, J., 1948.—"Listové monstrosity a abnormity rodu *Plagiothecium* Bryol. Eur." 51 (302), pp. 1–10.

658—Publications de l'Institut Belge pour l'Amélioration de la Betterave.

a. SIMON, M., 1948.—"La dissémination du nématode de la betterave dans les pays betteraviers." 16 (4), 223–240. [English & Flemish summaries pp. 237–238.]
b. SIMON, M., 1948.—"La désinfection du sol au moyen de fumigants volatils. Résultats du traitement, en 1947, d'une terre infectée de nématode de la betterave." 16 (4), 241–247. [English & Flemish summaries pp. 246–247.]
c. S[IMON], M., 1948.—"La présence de microkystes dans les sols belges." 16 (4), 261.
d. S[IMON], M., 1948.—"Les fumigants volatils." 16 (4), 261–263.

(658a) After outlining, with references, the world distribution of *Heterodera schachtii*, Simon lists in detail the Belgian communes in which it has been found, and makes proposals for its control. He classes as "lightly infested" those soils with up to 10 cysts per 100 gm., involving a production loss up to 5%, as "moderately infested" those with 10–50 cysts and a 10–20% loss, and as "heavily infested" those with over 50 cysts and a loss over 25%. Up to 382 cysts per 100 gm. have been found. Recommended control measures include early sowing, generous manuring, high plant density, and suitable rotations, including the replacing of permanent grass by leys, and the renewed use of abandoned sugar-beet soils. B.G.P.

(658b) Simon has used D-D mixture experimentally against *Heterodera schachtii* in plots of 40 sq. m., at dosages of 0, 200 and 400 kg. per hectare, injected 18 cm. deep by hand-injector, every 30 cm. along the rows 40 cm. apart, with 6-fold replication. The soil was rolled after injection and beet was sown 15 days later. After singling, the sugar-beet on the treated plots was better in appearance than the controls, and they finally gave a higher yield of roots, tops and sugar; but the count of viable cysts, made after lifting, remained at the same level on all plots (220 per 100 gm.) as before the experiment. B.G.P.

(658c) On the question of identifying cysts of *Heterodera schachtii* in Belgium it is pointed out that, while cysts of the oat and pea eelworms have not been recorded from Belgium, microcysts are common. They can be distinguished by their spherical shape and small size, and by the absence of eggs within. B.G.P.

(658d) This list of volatile fumigants suitable for soil disinfestation is arranged under the names of the manufacturers, and gives the trade name, proportion of active components, price, and in some cases nematicidal value. B.G.P.

659—Publications. Smithsonian Institution, Washington.

a. ABBOTT, R. T., 1948.—"Mollusks and medicine in World War II." [From the Smithsonian Report for 1947.] No. 3933, pp. 325–338.

(659a) An account is given of the U.S. Army campaign against *Schistosoma japonicum* infection on Leyte Island. There the hillside streams were safe, while well shaded and creek-drained land was a potential breeding ground for Oncomelania; on Samar Island, however, the areas around the hillside streams were heavily colonized. By observing snails which had been painted it was found that few had migrated more than 25 feet in two weeks. The eggs of Oncomelania are no larger than a pin head and are always camouflaged by the snail's faeces, which are composed almost entirely of fine grit and sand. The risk of outbreaks of schistosomiasis in the U.S.A. in the future probably depends on the introduction of intermediate hosts from foreign countries which have escaped the screening of plant quarantine. A map shows the distribution in the central region of the U.S.A. of *Pomatiopsis lapidaria*, which Stunkard has indicated as a possible vector of *S. japonicum*. R.T.L.

660—Puerto Rico Journal of Public Health and Tropical Medicine.

a. TAVARES DA SILVA, L. C., 1948.—"Splenectomy in schistosomiasis mansoni." 24 (1), 69–89. [Also in Spanish pp. 90–103.]

b. MALDONADO, J. F., HERNÁNDEZ MORALES, F., FOX, I. & THILLET, C. J., 1948.—"The incidence of filariasis bancrofti in government institutions for children in Puerto Rico." 24 (2), 121–134. [Also in Spanish pp. 135–149.]

(660a) Tavares da Silva operated on 60 splenomegaly patients who were in an advanced stage of the disease. Fifty-four were found positive for *Schistosoma mansoni* by faecal examination, four by liver biopsy and two on post-mortem examination. The patients were from agricultural areas in Pernambuco, Brazil, where *S. mansoni* incidence reaches 50% in some places. The operative procedure is described in detail. Removal of the spleen followed by antimonial therapy produced good results, and anaemia and leucopenia were corrected. There was an immediate mortality of 25% and a post-operation mortality of 6·6%. A study of 186 necropsy records showed that in 110 there was an increase in the weight of the liver and spleen in cases of schistosomiasis. This was most marked in the age groups 15–50 years. J.J.C.B.

(660b) With a view to finding a suitable place for experimental work with hetrazan, Maldonado *et al.* surveyed the incidence of *Wuchereria bancrofti* in three children's institutions. The infection rates were 3·8%, 1·3% and 10·4% respectively. There was only slight evidence of clinical filariasis in the most heavily infected group. Dissection of 693 mosquitoes caught in one building showed 14·7% of them to be infected. The commonest mosquito was *Culex quinquefasciatus* which formed 95% of the catches. *Aëdes solicitans* and *A. aegypti* were scarce and uninfected. Transmission of the parasite was predominently in one direction only, that of humans to mosquitoes. J.J.C.B.

661—Quarterly Bulletin, Northwestern University Medical School. Chicago.

a. SNORF, L. D., FOLTZ, E. E. & McMILLAN, R., 1948.—"Postwar intestinal parasitism in symptomatic patients from a university community, Evanston, Illinois, 1946–47." 22 (3), 286–291.

662—Quarterly Journal of Microscopical Science.

a. KERR, T., 1948.—"The pituitary in normal and parasitized roach (*Leuciscus rutilus* Flem.)." 89 (2), 129–137.

(662a) In *Leuciscus rutilus* infected with *Ligula* plerocercoids the size and granulations of the basophil cells of the middle glandular region of the pituitary are markedly reduced, while other cell types are not affected. The basophils are apparently comparable to the histologically similar basophil cells of the distal lobe of higher vertebrates. R.T.L.

663—Radiologia Clinica. Basle.

a. BUETTI-BÄUML, C., 1948.—"Die Röntgendiagnostik der vereiterten Leberechinokokkuscyste. (Ein röntgenologischpathognomisches Zeichen.)" 17 (3), 113–127. [English & French summaries p. 126.]

b. BEN AMI, M., 1948.—"Echinococcose calcifiée du foie à symptomatologie thoraco-abdominale." 17 (4), 193–199. [English & German summaries pp. 198–199.]

664—Radiologia Medica. Turin.

a. VITERBO, F., 1948.—"Contributo radiologico alla conoscenza delle cisti da echinococco vertebrale." 34 (2), 75–83.

665—Rassegna di Fisiopatologia Clinica e Terapeutica. Pisa.

a. TRONCHETTI, F. & CARTEI, S., 1948.—"Anemia iperemolitica perniciosiforme da *Taenia saginata*." 20 (1/3), 27–38.

666—Rassegna Medica Sarda.

a. LEONE, A., 1948.—"Contributo allo studio della echinococcosi polmonare infantile (studio clinico e radiologico)." 50 (3/4), 105–172.

667—Records of the South Australian Museum.

a. JOHNSTON, T. H. & CLARK, H. G., 1948.—"A new cestode, *Raillietina* (*R.*) *leipoae*, from the mallee hen." 9 (1), 87–91.
b. JOHNSTON, T. H., 1948.—"*Microphallus minutus*, a new trematode from the Australian water rat." 9 (1), 93–100.
c. JOHNSTON, T. H. & MAWSON, P. M., 1948.—"Some new records of nematodes from Australian snakes." 9 (1), 101–106.

(667a) *Raillietina R. leipoae* n.sp. and immature *Raillietina* sp.inq. are described from the intestine of the mallee hen, *Leipoa ocellata*, in South Australia. *R. leipoae* is distinguished from other species by its small size (3–6 mm.), large rostellar hooks, the presence of 20–40 rows of very small post-rostellar spines, and the number (20–30), irregular form and closely packed contents of the uterine capsules. R.T.L.

(667b) *Microphallus minutus* n.sp. occurred in large numbers with *Plagiorchis* sp.inq. and *Fibricola minor* in *Hydromys chrysogaster* var. *fulvolavatus* captured on the banks of the Murray River. Other *Microphallus* species have all been obtained from fishes. This is the smallest adult trematode yet found in Australia. It measures 0·41 mm. in length. Attempts to elucidate its life-cycle were unsuccessful. The systematic relationships of *Microphallus*, *Spelotrema* and *Levinseniella* are discussed. Johnston mentions that a *Microphallus minus* was described by Ochi in Japanese in 1928. It occurred in the dog and in the river rat and developed experimentally in mice, dogs, cats and man. R.T.L.

(667c) A miscellaneous collection containing ten species of nematodes is arranged under their hosts. Short annotations on each follow. The species are: *Kalicephalus* sp. from *Furina occipitalis*; *Ophidascaris pyrrhus* from *Notechis scutatus* and *Demansia psammophis*; *Ophidascaris filaria* from *Python variegatus*; *Polydelphis anoura* from *Python reticulatus* and *P. amethystinus*; *Tanqua tiara* from *Varanus varius*; *Physaloptera confusa* from *Demansia textilis*, *D. psammophis* and *Pseudechis porphyriacus*; *Hastospiculum* sp. from *Python reticulatus*; *Paraheterotyphlum australe* n.g., n.sp. from a sea snake, *Hydrus platurus*. This new genus differs from *Heterotyphlum* in possessing equal spicules. *Tanqua ophidis* n.sp. from *Natrix mairii* and *Acrochordus javanicus* resembles *T. anomala* and *T. diadema*, but has two divisions of the head bulb. There is no deep collar and the vulva is more posterior than in *T. diadema*. *Physaloptera demansiae* n.sp. from *Demansia psammophis* is described but without a differential diagnosis. R.T.L.

668—Recueil des Travaux de l'Institut National d'Hygiène. Travaux des Sections et Mémoires Originaux. Paris.

a. SAUTET, J., ASSEO, S. & CAMI, R., 1948.—"Influence de l'alimentation de disette sur le parasitisme intestinal à Marseille (1945)." Tome III, 2, 551–557.

(668a) Inadequate and crude wartime diet is blamed for a marked increase in human intestinal parasitism in the Marseilles area. Faecal examination was carried out on 200 persons of all classes, of whom 70 were foreigners or had come from outside France (e.g. Corsicans). No attempt was made to assess the incidence of Enterobius, but Trichuris was found in 50 (25%), Ascaris in 6 (3%) and *Hymenolepis nana* in 1 (0·5%). These figures are compared with previous records for Marseilles and for Paris. E.M.S.

669—Rendiconti. Istituto Superiore di Sanità. Rome.

*a. BETTINI, S. & LAGRANGE, E., 1948.—"Contrôle histologique sur les filaries de l'action antifilarienne de médicaments." 11, 450–455.

(669a) [This paper is reprinted in French from *Riv. Parassit.*, 1947, 8 (4), 191–196. For abstract see Helm. Abs., 16, No. 326e.]

670—Repertorio de Medicina y Cirugía. Bogotá.

*a. BONILLA NAAR, A. & GÓMEZ VARGAS, M., 1948.—" 'Aex' y faux [Faust] simplificado. Dos nuevos metodos para investigar parasitos intestinales." 4 (1), 49–68.

671—Report of the Administrator of Agricultural Research. U.S. Department of Agriculture.

a. UNITED STATES BUREAU OF ANIMAL INDUSTRY, 1948.—" Livestock and poultry parasite investigations." Year 1947–48, pp. 138–150.
b. UNITED STATES BUREAU OF ENTOMOLOGY & PLANT QUARANTINE, 1948.—"Golden nematode survey and inspection intensified." Year 1947–48, pp. 259–260.
c. UNITED STATES BUREAU OF PLANT INDUSTRY, SOILS & AGRICULTURAL ENGINEERING, 1948.—" Nematology." Year 1947–48, pp. 337–340.

(671a) In the coastal prairie of Texas where *Fasciola hepatica* and *Fascioloides magna* are common, *Fasciola hepatica* occurs in all domesticated ruminants but has not been found in deer, although *Fascioloides magna* occurred in 33 of 49 livers of deer examined. On a ranch in Refugio County, Texas, the livers of 68 out of 85 steers and of 86 out of 123 calves were found to be infected with *F. magna*. At the Regional Animal Disease Research Laboratory, Auburn, Alabama, calves kept on contaminated pasture had significantly more worms than those kept on pastures which had been rested for 4½ months during the winter. The average daily gain on the rested pastures was twice as high as on the contaminated pasture. In comparative tests against liver-fluke in sheep, carbon tetrachloride and hexachlorethane-bentonite were almost equally effective, the over-all efficacy of each being approximately 91%. A total of 463 *Moniezia expansa* developed in seven 6-week-old lambs given a total of 1,120 larvae. All the tapeworms were eliminated spontaneously from six lambs within 52 days; the seventh had retained 68 tapeworms at autopsy after 64 days. No injury was caused by the tapeworms. "Free-choice medication" with 1:9 phenothiazine-salt mixture appeared to protect lambs on infected pasture against the acquisition of heavy Nematodirus and Moniezia infections. Clinical helminthiasis developed in a flock left untreated during one season after five years continuous free-choice medication with phenothiazine and salt; therapeutic dosing was necessary to control the outbreak. Hexachlorethane-bentonite, at a dose of 30 c.c. of 50% suspension, was 94% effective in removing liver-fluke from goats. Plugging of the bile-ducts with ascaris was found to be associated in pigs with generalized icterus leading to condemnation. Sodium fluoride was relatively ineffective against ascaris and poorly tolerated when given to pigs in milk or slops. Tests in dry ground feed at 0·5%, 0·75% and 1% by weight of feed indicated the 0·75% dosage as giving maximum efficacy (97%) and safety. 19% of 1,000 pig livers from the Midwest showed lesions due to kidney-worm, which is apparently spreading northward from the Southern States. Continuous medication with 0·5% by weight of phenothiazine in the mash, reduced the incidence of "blackhead" in turkeys to 8% compared with 70% of untreated birds. In tests against *Ascaridia galli* in poultry, phenothiazine-nicotine-bentonite mash containing 15 gm. commercial nicotine sulphate, 151 gm. phenothiazine and 287 gm. bentonite in 44 lb. mash fed, *ad lib.*, was more effective than 0·35–0·4 gm. of a mixture of 7·92 gm. nicotine sulphate and 16 gm. bentonite given in gelatin capsules to each bird. R.T.L.

(671b) During 1948 an intensive survey was made of 39,977 acres of potato land in and around the original centre of infestation with *Heterodera rostochiensis* at Hicksville, Long Island, in the State of New York. Potato roots were inspected on 10,397 acres, but soil sampling was generally used. The infested area covered 6,154 acres on 150 properties of which 64 acres, on three properties, were in Suffolk County and the remainder in Nassau County. Special surveys in Steuben County, N.Y. and in the chief potato growing section of Maine were negative. More than half the area infested was withdrawn from production in 1948 under a State compensation programme. R.T.L.

(671c) The top six inches of agricultural soils in the U.S.A. may harbour from 2 to 18 millions of nemas feeding on living or dead plants and on soil organisms. As plants will withstand nematode attacks better once the primary root system is established, the protection of seedlings and young plants is an essential control measure. By limiting soil treatment to the spots, sites or rows where the crop is to grow, the application of fumigants is a paying proposition even with low-priced crops. Many types of nematodes which are surface feeders on plant roots are factors in causing lesions, decay and malformations in the roots. A greater variety of these exists in vascular than in parenchymatous tissues penetrating the vascular tissues from the root surface with their long, oval stylets or with their heads or anterior parts of the body. They are often overlooked as they frequently drop from the roots when the plants are lifted. R.T.L.

672—Report. Cotton Research and Industry Board, Southern Rhodesia.

*a. MITCHELL, B. L., 1948.—" Tests for eelworm resistance in various cottons." 11th (1946–47).

673—Report of the Council for Scientific and Industrial Research, Australia.

a. AUSTRALIA. COUNCIL FOR SCIENTIFIC & INDUSTRIAL RESEARCH, 1948.—" Animal health and production investigations." 22nd (1947–48), pp. 26–33.

(673a) In Queensland two or possibly three species of *Onchocerca*, viz., *O. gibsoni*, *O. gutturosa* and *O. lienalis* occur in cattle, but their larvae from the skin cannot be distinguished. Two filariid larvae, which could not be identified, occurred in 2 out of 250 *Austrosimulium pestilens*. Parasitic gastro-enteritis in beef and dairy cattle is not uncommon in the coastal and subcoastal regions. Losses are mainly confined to young stock during the late winter and early spring. Adult cattle are relatively resistant. Permanent calf paddocks appear to be a bad feature of calf husbandry in Queensland. Clear evidence was obtained that phenothiazine-salt licks can prevent losses from haemonchiasis in sheep in wet seasons, but the method is not considered to be reliable. Wheat germ oil had no effect on *Haemonchus contortus*. Hexachlorethane and carbon tetrachloride were effective against paramphistomes in sheep when dosed into the rumen, but tetrachlorethylene, *o*-dichlorbenzene, *p*-tertiary-butyl phenol, nicotine sulphate and phenothiazine were ineffective. Eggs did not appear in the faeces of young sheep to which Oesophagostomum larvae had been administered until the 39th to 58th day, and until the 40th to 150th day in sheep 2–3 years old. These long latent periods permit of the carry over of the parasites from season to season, as they are protected from anthelmintics while in the nodules. The importance of maintaining sheep on a high plane of nutrition is emphasized. With good rations *Haemonchus contortus* infections were thrown off in 3–39 days. Existing infections with *H. contortus* are thrown off within a few days after the administration of fairly heavy doses of infective larvae. This is held to explain the "self cures" which are observed in the field and is an important and hitherto unsuspected aspect of the host-parasite relationship. Satisfactory antigens have been prepared from infective larvae but those obtained from adult worms varied greatly in potency. The alcohol soluble lipid is an essential constituent of the antigen used to detect complement-fixing antibodies. The active antigenic principle is an unsaturated fatty acid which may be associated with a phospholipid such as lecithin. Copper sulphate in concentrations up to one part per million killed *Simlimnaea brazieri*, the Australian vector of *Fasciola hepatica*. Extracts of tea-tree (*Leptospermum scoparium*) were also lethal but of little used under field conditions. Preliminary studies on aerobic metabolism indicate that adult intestinal nematodes in sheep can maintain their haemoglobin in oxygenated forms at very low tensions. The efficiency of nematode haemoglobins as oxygen carriers at the oxygen tensions in the host's gut is under investigation. Interesting differences in RQ figures were noted in the respiratory metabolism of various species. Phenothiazine " labelled " with radioactive sulphur is being used to determine its mode of action as an anthelmintic. Estimations of haematin in the faeces of rats infected with *Nippostrongylus muris* indicated that the parasite feeds on the host tissue and causes no appreciable

haemorrhage. Investigations on *Nematodirus* spp. and *Ascaridia galli* suggest that acetate is an important immediate source of energy. Rats fed on rations high in protein are much less susceptible to *N. muris* than those on low protein diets of similar energy value. R.T.L.

674—Report on the Health and Medical Services of the State of Queensland.

a. THOMPSON, S., 1948.—"Hookworm campaign." Year 1947–48, pp. 32–34.

(674a) In a field campaign against hookworm in Queensland, 622 out of 4,787 faecal specimens examined were positive for hookworm eggs; 320 infected persons were cured. Of 1,977 schoolchildren examined, 88 had hookworm and 252 had other helminth infections. The preventive measures used included the spreading of lime on infected soil. R.T.L.

675—Report of the Orient Hospital, Beirut.

a. HADDAD, S. I., 1948.—"Hydatid disease of the lungs." 1st (1948), pp. 49–53.

676—Report of the Scientific Advisory Board of the Indian Research Fund Association.

a. ANON., 1948.—"Filariasis." Year 1948, pp. 184–192.

(676a) At a meeting of the Filariasis Advisory Committee of the Indian Research Fund Association, Mukerji reported on the action of thirty-three chemotherapeutic compounds on microfilariae *in vitro*. The minimum lethal concentrations and the times taken to kill almost all the microfilariae while those in the controls remained active, are tabulated. paludrine, miracil-D, cyanine dye No. 863, Styryl quinoline 314 and five organic arsonic acids had a marked effect. The director of the King Institute, Guindy, Madras, reported on the first results of tests of the usefulness of intradermal and other methods for the diagnosis of early filariasis. A saline extract of adult *Conispiculum guindiensis* from *Calotes versicolor* was shown to produce a larger wheal in clinical filariasis than either of the two control solutions used. Prasada Rao reported from the Medical College, Madras, that good results were obtained in the treatment of acute cases of filariasis with hetrazan. The microfilariae disappeared in three to seven days. In the majority of cases antigen tests became negative after treatment. Although relapses occurred in cases of lymphangitis, there was general improvement frequently and the intervals between attacks were longer. Good results were also obtained in early but not in advanced elephantiasis. R.T.L.

677—Report. University of Florida Agricultural Experiment Stations.

a. EMMEL, M. W., 1948.—"Sulfurization of soil for the control of certain intestinal parasites of chickens." Year 1947–48, p. 54.
b. SWANSON, L. E., 1948.—"Control of the common liver fluke." Year 1947–48, pp. 56–57.
c. BRATLEY, H. E., 1948.—"Breeding vegetable plants resistant to root-knot nematodes." Year 1947–48, p. 67.
d. BRATLEY, H. E., 1948.—"Effects of mulches on root-knot nematodes." Year 1947–48, p. 67.
e. BRATLEY, H. E., 1948.—"Effects of annually repeated soil treatments of D-D for controlling nematodes on gladiolus." Year 1947–48, p. 69.
f. NETTLES, V. F. & MYERS, F. E., 1948.—"Effect of soil fumigants on yield and quality of vegetables." Year 1947–48, p. 85.
g. ANON., 1948.—"Soil fumigants." Year 1947–48, p. 115.
h. ANON., 1948.—"Meadow nematode." Year 1947–48, p. 115.
i. WILSON, J. W. & CHRISTIE, J. R., 1948.—"Control of nematodes injurious to vegetable crops." Year 1947–48, p. 144.
j. KINCAID, R. R. & VOLK, G. M., 1948.—"Soil fumigation for cigar-wrapper tobacco." Year 1947–48, pp. 234–235.
k. CONOVER, R. A., 1948.—"Okra fruit nematode." Year 1947–48, p. 269.

(677a) Roundworm and tapeworm infections in poultry confined to yards were reduced by 65% after sulphurization of the soil. R.T.L.

(677b) Marked improvement occurred within 30 days in 651 cattle with liver-fluke after treatment with hexachlorethane suspension at the rate of 10 gm. per 100 lb. body-weight. In inspected slaughterhouses in Florida 10,514 livers from 168,067 cattle were condemned for fluke infection: 1,025 flukes were collected from a calf 10 months old. Infected rabbits are said to contribute to the spread of fascioliasis. R.T.L.

(677e) Rewi Fallu gladiolus produced more spikes, side spikes and flowerlets on plots of soil treated during the previous year with D-D. Treated plots produced about 25% more corms ¾ inch in diameter and larger than those on untreated plots. R.T.L.

(677f) Soil fumigation with D-D one month before the application of fertilizer and planting with tomatoes effectively controlled root-knot, but no control plots were made. R.T.L.

(677g) Soil fumigation by D-D and Dowfume W-10 produced no noticeable differences in strawberry production either in plant growth or yield of fruit. A strawberry nursery infested with *Aphelenchoides fragariae*, which was planted with nematode-free plants 10 days after treatment with D-D, produced an excellent crop of runner plants free from infestation. Plants on a chlordane treated plot produced abundantly but became badly infested. This plot had been treated with D-D in the previous year and had produced a successful crop, but the roots were badly infested at the end of the season. R.T.L.

(677h) Meadow nematode was not found in 1947–48 although it was very serious in certain areas in 1946–47. This presumably resulted from non-planting of previously infested fields and the excessive rainfall of 1947–48. R.T.L.

(677i) D-D at 40 gal. per acre applied to plots planted with Tendergreen beans as an indicator crop 7, 9, 12 and 15 days after treatment, resulted in significantly lower stands of bean plants than in plots treated with 20% ethylene dibromide. At the Central Florida Station sweet corn, snap beans and cowpeas were generally infested by *Heterodera marioni*. *Xiphinema* was very common in the Sanford region soil attacking the roots of strawberries, beans, cowpeas and corn, but its importance as a plant parasite was not ascertained. R.T.L.

(677j) Soil fumigation with D-D type (20 gal. per acre) and ethylene dibromide type (15 gal. per acre) gave a satisfactory reduction in the incidence of *Heterodera marioni* in plots of cigar-wrapper tobacco and some reduction in coarse root attributed to *Pratylenchus* spp. D-D applied at 23 gal. per acre was more effective in promoting persistence of ammonia in the soil after fertilization than Dowfume W-40 at 15 gal. per acre. The effect of fumigation on the ammonia level in the soil and consequently on the plant should be differentiated from that on nematode control for a proper evaluation of the fumigants. R.T.L.

(677k) Okra fruit and pedicels were found to be infested with nematodes which Dr. G. Steiner has identified as *Panagrolaimus subelongatus* and an undescribed *Aphelenchoides* sp. R.T.L.

678—Report of the University of Hawaii Agricultural Experiment Station.

a. ALICATA, J. E. ET AL., 1948.—"Parasitology." Biennium 1946–48, pp. 97–114.
b. FRAZIER, W. A., 1948.—"Nematode resistance." Biennium 1946–48, pp. 155–156.

(678a) From wild birds frequently seen on poultry farms in Hawaii and which often feed from the feeding troughs, Alicata, Kartman & Fisher collected the following helminths: *Tetrameres* sp. from *Passer domesticus* and *Paroaria cucullata*; *Cheilospirura* sp., *Microtetrameres* sp., *Oxyspirura mansoni* and undetermined species of cestodes and trematodes from *Acridotheres tristis*. *O. mansoni* and *Cheilospirura hamulosa* occurred in chickens. Kartman & Alicata report that during 1946 the percentage of whole pig livers discarded on account of helminth parasitism, mainly due to *Stephanurus dentatus* and to a lesser extent to migrating larvae of *Ascaris lumbricoides*, was 7·6% while that from all causes was 8·3%;

in 1947 this rose to 11% from parasitism and 11·3% from all causes. A chart shows a significant correlation between the number of parasitized kidneys discarded and the number of parasitized livers condemned. Alicata found that *Balanites aegyptiaca* is toxic to *Australorbis glabratus*, the intermediate host of *Fasciola gigantica* of cattle in Hawaii. Ground pulp and shell of green-ripe fruits killed 100% of the molluscs in one hour in a dilution of 1:1,000. A dilution of 1:2,000 was fatal in two hours. The experimental material was grown in Puerto Rico. The helminths collected from cattle, swine, dog, rat, poultry and man during a visit to the Pacific Islands Ponape, Guam and Truk in 1946 are tabulated. Detailed reports of these findings have appeared elsewhere [for abstracts see Helm. Abs., **15**, No. 213n ; **17**, No. 40a]. R.T.L.

(678b) The root-knot-resistant progeny obtained by crossing the resistant *Lycopersicon peruvianum* with a hybrid from *L. hirsutum* × *L. esculentum* were highly incompatible with *L. esculentum*. Promising nematode resistance has been obtained in crosses between lines resistant to spotted wilt, fusarium wilt and grey leaf spot and an *L. peruvianum* cross previously hybridized and tested for nematode resistance in Arkansas. The genes for resistance to *Heterodera marioni* seem to be dominant to those for susceptibility. In one instance a single gene was found to be largely responsible for resistance. M.T.F.

679—Report. Vegetable Growers' Association of America, Inc.

*a. LEAR, B., 1948.—"The use of soil fumigants by the greenhouse operator." 40th (1948), pp. 212–218.

680—Research and Farming. North Carolina Agricultural Experiment Station.

a. TODD, F. A., 1948.—"Soil fumigants appear effective on root knot, meadow nematode." [Report of the North Carolina Agricultural Experiment Station, 70th (1947)], **6** (3), 39–40.
b. CLAYTON, C. N., 1948.—"'Resistant' lines found susceptible to some races of nematodes." [Report of the North Carolina Agricultural Experiment Station, 70th (1947)], **6** (3), 46.
c. CLAYTON, C. N. & ELLIS, D. E., 1948.—"Soil treatments reduce vegetable root knot." [Report of the North Carolina Agricultural Experiment Station, 70th (1947)], **6** (3), 58.

(680a) Todd found that both ethylene dibromide (40% W/W) and D-D, at 20 gal. per acre, reduced root-knot and meadow nematode. On land under continuous tobacco both treatments produced yield increases, but D-D had little effect on total yield in two-course rotations with maize, cotton, or peanuts as the alternative crop. Treatments may affect tobacco quality and no recommendations can yet be made. B.G.P.

(680b) Submitting two "resistant" peach stocks, Shalil and Yunnan, and two susceptible stocks, Lovell and Natural, to five peach soils containing root-knot, Clayton found that all four stocks were equally susceptible in two of the soils but the first two stocks were resistant in the other three soils. Resistance thus applies only to some races of root-knot. B.G.P.

(680c) Clayton & Ellis were able to reduce root-knot severity from 98% to 5% by applications of uramon, D-D or chloropicrin, with yields of marketable tomatoes increasing from 7 to 12 tons per acre. Eradication is incomplete even after a second annual treatment, and not all crops respond equally well ; yields of snap beans were reduced by the fumigants mentioned, possibly through effects on nodule bacteria. For D-D, 200 lb. per acre is near the lower limit of effectiveness. B.G.P.

681—Revista Argentina de Urología.

*a. ERCOLE, R., 1948.—"Quiste hidatídico retrovesical." **17** (7/8), 113–121.
*b. GRIMALDI, A. A., 1948.—"Quiste hidatídico de riñón." **17** (7/8), 183–192.

682—Revista de la Asociación Argentina de Dietología.

a. RIVERO, E., 1948.—"Parasitosis intestinal en la infancia." **6** (21/22), 174–176.

683—Revista de la Asociación Médica Argentina.

a. VACCAREZZA, O. A., 1948.—"Orientación actual en el tratamiento quirúrgico de los quistes hidáticos del pulmón." 62 (635/636), 398–400.
b. TAIANA, J. A., SCHIEPPATTI, E. & BORAGINA, R., 1948.—"Equinococosis pulmonar. Tratamiento quirúrgico." 62 (637/638), 441–447.

684—Revista Brasileira de Medicina.

a. PASSOS, W. & CASTRO BARBOSA, N. DE, 1948.—"*Syngamus laryngeus* na espécie humana." 5 (5), 340.
b. RODRIGUES DA SILVA, J., 1948.—"Contribuição ao estudo das formas evolutivas da esquistosomiase mansoni." 5 (11), 794–802. [English summary p. 801.]

(684a) A red-coloured foreign body was removed from the throat of a patient with a cough of three months' duration. This proved to be a paired Syngamus which Passos & Castro Barbosa illustrate and identify as *Syngamus laryngeus*. Its natural hosts are cattle, sheep and goats. R.T.L.

(684b) The eggs obtained by rectal biopsy from cases of schistosomiasis before and after treatment give a more reliable basis than those present in the faeces for assessing the results of anthelmintic treatment. Da Silva agrees that specific drugs (antimony salts) act not on the eggs but on the female worms and prevent oviposition. R.T.L.

685—Revista Clínica Española.

a. PURSELL MÉNGUEZ, A., 1948.—"El problema quirúrgico del tratamiento de la equinocosis pulmonar. Nuestra aportación a su resolución." 28 (2), 111–120. [English, French & German summaries pp. 119–120.]
b. SANCHÍS BAYARRI, V. & MARCO AHUIR, R., 1948.—"Reacciones de Cassoni y Weinberg positivas con liquido de cisticerco de la *Taenia serialis* en un portador de quistes hidatídicos. Sobre el mecanismo de estas reacciones." 28 (3), 156–161. [English, French & German summaries pp. 160–161.]
c. OBRADOR, S., URQUIZA, P. & ALBERT, P., 1948.—"Quiste hidatídico supurado del cerebro extirpado radicalmente." 29 (3), 180–183.
d. LEY GRACIA, E., 1948.—"Cisticercosis." 30 (5), 339.

(685b) Fluid from *Cysticercus serialis* was found to give as strong a Weinberg reaction as hydatid fluid with blood serum of a hydatid patient. Casoni's test was also positive and gave a strong reaction with both antigens. Resistance to heat and deproteinization were identical in the two antigens. E.M.S.

686—Revista Española de Tuberculosis.

a. CASTRO GARCÍA, L. DE & MONTES CID, D., 1948.—"Hidatidosis pulmonar (consideraciones terapéuticas)." 17 (154), 33–47; (155), 109–122; (156), 179–194.

687—Revista de la Facultad de Medicina Veterinaria, Lima.

*a. RAMOS SACO, T., 1948.—"Datos estadisticos y consideraciones sobre la incidencia de la 'hidatidosis' en el ganado de carniceria en el Perú." 3, 83–91.

688—Revista Ibérica de Parasitología.

a. CALVENTE, I. G., 1948.—"Revisión del género *Pharyngodon* y descripción de especies nuevas." 8 (4), 367–410.

(688a) Calvente has subdivided the genus *Pharyngodon* into *P.* (*Pharyngodon*) n.subg., in which the spicule is clearly visible and *P.* (*Neyrapahryngodon*) n.subg., in which the spicule is invisible or absent. *P.* (*N.*) *neyrae* n.sp., which is distinguished by the length of the male tail and by the number of papillae, was recovered from the rectum of *Tarentola mauretanica* in Granada. *P.* (*P.*) *auziensis* and *P.* (*N.*) *tectipenis* from the same host are

redescribed. *P.* (*P.*) *medinae* n.sp., which is distinguished by the form of the lateral alae, by the ova and by the position of the excretory pore and vulva, is described from the rectum of *Lacerta muralis*. Ten species of which descriptions were not available, and three named species of which the males are unknown, are temporarily left in the genus *Pharyngodon*. P.M.B.

689—Revista do Instituto Adolfo Lutz. São Paulo.

a. ALVARES CORRÊA, M. O., 1948.—"Considerações em torno da ocorrência de óvos de helmintos da família Trichostrongylidae (Leiper, 1912) em fézes humanas." 8 (1), 87–98.

(689a) Between 1942 and 1948 75 cases of infection with *Trichostrongylus* sp. were observed during the examination of the faeces of 46,951 Brazilians at the Instituto Adolfo Lutz, São Paulo. The majority occurred in children of school age. No adult worms were recovered after the use of anthelmintics and laboratory animals could not be infected with larvae developed from the eggs. R.T.L.

690—Revista del Instituto de Salubridad y Enfermedades Tropicales. Mexico.

a. MAZZOTTI, L., 1948.—"Posibilidad de utilizar como medio diagnostico auxiliar en la oncocercosis, las reacciones alergicas consecutivas a la administración del 'hetrazan'." 9 (3), 235–237.
b. OSORIO, M. T., 1948.—"Sobre una modificación a la técnica de cuenta de huevecillos de Stoll." 9 (3), 245–252.
c. MAZZOTTI, L., 1948.—"Aplicación de la intradermorreacción en casos humanos de infección por *Fasciola hepática*." 9 (4), 257–261.
d. VARGAS, L., 1948.—"Notas sobre la oncocerciasis. VII. Infección experimental de *Simulium* (*Lanea*) *mangabeirai* con *Onchocerca volvulus*." 9 (4), 309–311. [English summary p. 311.]
e. VARGAS, L., 1948.—"Notas sobre la oncocerciasis. VIII. Lineamientos entomológicos sobre el control de los simúlidos." 9 (4), 313–320. [English summary p. 320.]

(690a) Provided there is no *Wuchereria bancrofti* infection, the occurrence of allergic symptoms following the administration of hetrazan is a valuable diagnostic sign for onchocerciasis, even when the patients have hookworm, Enterobius, Trichuris or Strongyloides for these do not induce allergic phenomena with hetrazan. R.T.L.

(690b) With a modification of Stoll's method in which water instead of N/10 sodium hydroxide is added to the faecal sample at a dilution of 1:30 instead of 1:15, Osorio obtained, from 244 counts, results closely comparable with the Stoll method and with the Lane and Caldwell methods. This modification is claimed to be quicker than the original method, it can be easily used by any practitioner and does not require any special chemicals. P.M.B.

(690c) Mazzotti finds that the intradermal reaction can be used to diagnose fascioliasis in human patients. The patients were known carriers, as *F. hepatica* eggs had been found in the stools. The antigen used was a saline extract of *F. hepatica*. A dilution of 1 in 1,000 proved most satisfactory, the reaction reaching a maximum in 15–20 minutes. P.A.C.

(690d) Sausage-shaped larvae were found in the thoracic muscles of a *Simulium* (*Lanea*) *mangabeirai* 124 hours after biting a case of *Onchocerca volvulus*. The Simulium was reared in the laboratory from a larva collected in Los Remedios, Mexico, at an altitude of 2,645 metres. R.T.L.

(690e) Vargas is of the opinion that onchocerciasis could be controlled by a campaign from October to April directed against the principal vector *Simulium ochraceum* and subsequently against *S. callidum* and *S. metallicum*. Details are given of the character of the breeding streams and of methods of applying DDT and gammexane as larvicides. R.T.L.

691—Revista Kuba de Medicina Tropical y Parasitología.

a. KOURÍ, P., 1948.—"Diagnóstico, epidemiología y profilaxis de la fascioliasis hepática humana en Cuba. Síndrome eosinofílico febril." 4 (3), 63–67.
b. BASNUEVO, J. G., 1948.—"Teniasis y estaño (II)." 4 (6), 119–121. [English summary p. 121.]
c. BASNUEVO, J. G., 1948.—"Hexilrresorcinol y quenopodio." 4 (6), 121–122. [English summary p. 122.]
d. BASNUEVO, J. G., 1948.—"La piperazina en el tratamiento de la filariasis." 4 (6), 126.
e. VALVERDE, A., 1948.—"Un caso de teniasis curado con solitaricida." [Correspondence.] 4 (6), 130.
f. OSIMANI, J. J., 1948.—"Parasitismo humano por *Dipylidium caninum* (Linneo, 1758)." 4 (7), 143–145. [English summary p. 145.]
g. JENKINS, A. C., 1948.—"Fascioliasis hepatica humana en Costa Rica. (Presentación de un caso.)" 4 (8), 160–161.
h. ARGUEDAS S., J., 1948.—"Presentación de un caso del fascioliasis hepatica." 4 (8), 162.
i. KOURÍ, P. & BASNUEVO, J. G., 1948.—"Reacciones tóxicas arsenicales. Idiosincrasia o hiper-susceptibilidad a estas drogas." 4 (9/10), 184–185.
j. BASNUEVO, J. G., 1948.—"Tricocefaliasis y arsénicos orgánicos pentavalentes." 4 (9/10), 185–188. [English summary p. 188.]
k. GÁLVEZ FERMÍN, N., 1948.—"Fascioliasis del coledoco. (Reporte de un caso operado.)" 4 (9/10), 191–192.
l. CALVÓ FONSECA, R., 1948.—"Tres nuevos casos de parasitismo humano por *Hymenolepis diminuta* en Cuba." 4 (9/10), 193.

(691b) Basnuevo believes that "Solitaricida", which contains metallic tin and certain tin compounds has a therapeutic value in cases of *Taenia saginata* infection. Treatment is preceded and followed by purgatives. A single treatment was 60% effective while a second treatment cured 86% of the cases. [See also Helm. Abs., **16**, No. 615y.] P.A.C.

(691c) Basnuevo reports that a mixture of hexylresorcinol and chenopodium effectively removes *Ascaris lumbricoides*. The dose for adults is 1 gm. hexylresorcinol and 0·5 gm. chenopodium given in gelatin capsules. P.A.C.

(691d) Basnuevo has evidence that piperazine destroys adult *Wuchereria bancrofti*. Microfilariae circulating in the blood stream begin to disappear on the second day of treatment. In some cases they have completely disappeared: the dosage necessary for this is 1 mg. or 2 mg. per kg. body-weight. P.A.C.

(691e) Valverde reports that he cured a case of taeniasis with "Solitaricida", a tin compound. P.A.C.

(691f) Osimani describes a case of *Dipylidium caninum* infection in a child 8 months old. It was cured by treating with a mixture of garlic and santonin. The child was living under very poor conditions but no other member of the family appeared to be infected. P.A.C.

(691g) Jenkins describes a case of human infestation with *Fasciola hepatica* in Costa Rica. Such infection may be diagnosed by faecal examination, by duodenal tube or by the presence of eosinophilia in the blood stream. It would appear to be the first autochthonous case in the district. P.A.C.

(691h) Arguedas describes the clinical picture of human fascioliasis. The faeces contained eggs of *Fasciola hepatica*, *Trichuris trichiura* and cysts of *Endamoeba histolytica*. There was an eosinophilia reaching 40% at one time while the haemoglobin was reduced. Kahn's reaction was positive. P.A.C.

(691i) Kourí & Basnuevo report that pentavalent arsenicals may safely be used in the treatment of helminths, provided certain safeguards are observed. Some patients show themselves hypersensitive and treatment is then followed by dermatitis, retinal oedema, albuminaria and other signs. The drugs should never be used when there is any gastro-intestinal disturbance, pulmonary congestion, skin eruptions, icterus or neuritis. Vitamin C appears to reduce the toxicity of these arsenicals. P.A.C.

(691j) Basnuevo treated five cases of Trichuris with Kubarsolo (acetyl-amino-hydroxyphenol-arsonic acid) and cured four of them. He later treated 14 similar cases with Kutan (4-carbamino-phylarsonic acid) and cured nine. P.A.C.

(691k) Gálvez Fermín describes a human case of fascioliasis of the gall-bladder. The liver also contained some nodules. The worms were identified as *Fasciola hepatica*. P.A.C.

(691 l) Calvó Fonseca reports that three children, aged six, ten and eleven years respectively, were harbouring *Hymenolepis diminuta*. They also had other helminth and protozoal parasites. P.A.C.

692—Revista Médica de Chile.

a. LABBE V., V. & WEINSTEIN R., M., 1948.—"Un caso de cisticercosis generalizada. (Ladrería.)" **76** (7), 427–431. [Discussion p. 431.]

693—Revista Médica de Costa Rica.

a. BUTTS, D. C. A., 1948.—"La infección filárica en Costa Rica. Contribución del Hospital de la Compañia Bananera de Costa Rica en Limón." Año XV, 8 (169), 103–108.

(693a) The incidence of filariasis in Costa Rica, as revealed by blood films taken at night, ranged from 1% on the Pacific coast to 15% on the Atlantic coast. R.T.L.

694—Revista Médica Dominicana.

a. PONCE PINEDO, A. M., 1948.—"Esquistosomiasis de Manson en Santo Domingo." **3** (1), 6–16.
b. CARR, H. P., 1948.—"La terapéutica de la uncinariasis." **3** (1), 17–26.

(694a) [This paper is reprinted from *Puerto Rico J. publ. Hlth*, 1947, **22** (3), 316–324. For abstract see Helm. Abs., **16**, No. 139c.]

695—Revista de Medicina Veterinaria y Parasitología. Caracas.

a. NIÑO, F. L., 1948.—"Nueva observación de *Dioctophyme renale* en perros de Buenos Aires." **7** (1/4), 47–53.
b. CABALLERO Y C., E. & ALENCASTER I., G., 1948.—"Presencia de *Physocephalus sexalatus* (Molin, 1860) Diesing, 1861, en el estómago de un 'Perezoso' (Mammalia: Bradypodidae)." **7** (1/4), 61–64.
c. VOGELSANG, E. G., 1948.—"Contribución al estudio de la parasitología animal en Venezuela. XVI.—Ecto y endoparásitos en animales domésticos y salvajes de la Guayana Venezolana." **7** (1/4), 145–151.
d. BARATTINI, L. P., 1948.—"Problemas de la pesca y fluctuación del pescado en el Uruguay." **7** (1/4), 153–202.
e. VOGELSANG, E. G., 1948.—"Equinococosis de un dromedario (*Camelus dromedarius*)." **7** (1/4), 213–215.
f. VOGELSANG, E. G. & GALLO, P., 1948.—"Caso de parasitismo humano por *Dipylidium caninum* (L. 1758)." **7** (1/4), 217–218.

(695a) *Dioctophyme renale* is recorded for the fourth time in Buenos Aires, in the right kidney of a dog. Niño stresses the importance of this observation, as the parasite may also live in man. P.A.C.

(695b) Caballero & Alencaster record the presence of a male specimen of *Physocephalus sexalatus* in the stomach of *Bradypus griseus* in Panama. This is a new host record. P.A.C.

(695c) Vogelsang lists some of the parasites which may attack domestic and wild animals in Venezuela. He makes some remarks about the pathology of *Spirocerca sanguinolenta* in the dog. P.A.C.

(695d) In considering some of the problems of hydrobiology as related to the fishing industry in Uruguay, Barattini mentions *Tetrarhynchus fragilis* as the commonest helminth parasite of fish. P.A.C.

(695e) Vogelsang reports the presence of hydatid cysts in the spleen and lungs of *Camelus dromedarius* in the Zoological Gardens at Maracay. The dromedary had been attached to an itinerant circus, and it is considered that the infection could not have been acquired in Venezuela. Hydatid has been reported previously from camels in other parts of South America. P.A.C.

696—Revista Médico-Quirúrgica de Oriente. Santiago de Cuba.

a. ORTEGA CANET, F., 1948.—"Indice de infestación por parasitismo enteral en la ciudad de Santiago de Cuba." 9 (3), 167–176.

(696a) The helminth incidence in 6,137 inhabitants of the city of Santiago de Cuba was: hookworm 4·9%, Ascaris 9·08% and Trichuris 40·3%. R.T.L.

697—Revista Paulista de Medicina.

a. COUTINHO, J. O., 1948.—"Nota sôbre a intradermo-reação no diagnóstico da esquistossomose de Manson." 33 (1), 15–20. [English summary p. 20.]

(697a) Tests made with an antigen prepared from adult specimens of *Schistosoma mansoni* gave positive results in all patients with *S. mansoni* and negative results in all tests on healthy individuals and in those affected with various diseases including strongyloidiasis and ancylostomiasis. Details are given of the technique followed in preparing the antigen. P.M.B.

698—Revista do Serviço Especial de Saúde Pública. Rio de Janeiro.

a. PEREIRA, O., 1948.—"Observações sôbre a ação do hexyl-resorcinol e tetracloretileno nas infestações pelos ancilostomídeos, *Ascaris lumbricóides*, *Tricocephalus trichiura* e sua aplicabilidade no meio rural." 2 (1), 47–58. [English summary p. 53.]

b. CAUSEY, O. R., DEANE, M. P., DA COSTA, O. & DEANE, L. M., 1948.—"Estudo sôbre a incidência e a transmissão da filária, *Wuchereria bancrofti*, em Belem, Brasil." 2 (1), 59–66.

c. PAYNE, E. H., BALTHAZAR, E. & FERNANDES, J. S., 1948.—"Novas observações com o óxido de Melarsen (am novo arsenical) no tratamento das doenças tropicais." 2 (1), 81–86.

d. PINTO, D. B. & PENIDO, H. M., 1948.—"Nota sôbre o efeito planorbicida do complexo sulfato de cobre-ácido tartárico." 2 (2), 509–514. [English summary p. 514.]

e. DEANE, M. P. & DA COSTA, O. R., 1948.—"Relatório preliminar de experiências com o Hetrazan, feitas com o fim de verificar sua aplicabilidade no contrôle da transmissão da filariose em Belém." 2 (2), 527–544. [English summary pp. 536–539.]

(698a) A combination of hexylresorcinol and tetrachlorethylene cured 98·5% of the cases of *Ascaris lumbricoides* infection and 93·9% of those of hookworm. Only 11·7% of those with Trichuris became negative. Tetrachlorethylene alone cured less than 40% of those treated. R.T.L.

(698b) [This is a translation of a paper which appeared in *Amer. J. Hyg.*, 1945, 41 (2), 143–149. For abstract see Helm. Abs., 14, No. 3a.]

(698c) Melarsen oxide given intravenously in daily doses not exceeding 25 mg. did not cause toxic symptoms. The stability of the solution renders it especially convenient for use in the tropics. The authors suggest that the symptoms reported by Culbertson and Rose during its use for filariasis were due to reaction to the dead filariae in the blood stream. R.T.L.

(698d) It has been found that the precipitation of copper sulphate by bicarbonates in water is prevented, without reducing its efficacy against the vectors of *Schistosoma mansoni*, by the addition of sodium tartrate or tartaric acid. R.T.L.

(698e) Three days' treatment with 1 mg. hetrazan per kg. body-weight, i.e. about 50 mg. daily, sufficed in most cases to cause the disappearance of *Wuchereria bancrofti* microfilariae from the night blood, or to reduce the number to below 15 microfilariae per 20 c.mm. of blood which is generally regarded as the concentration necessary for the infection of the vector *Culex fatigans*. R.T.L.

699—Revista de la Sociedad Mexicana de Historia Natural.

a. CABALLERO Y C., E., 1948.—"*Filaria martis* Gmelin, 1790 en mamíferos de Nuevo León y consideraciones sobre las especies del género *Filaria* Müller, 1787." 9 (3/4), 257–261.
b. CABALLERO Y C., E., 1948.—"Nemátodos de las aves de México. X. Algunos nemátodos de las aves del Estado de Nuevo León." 9 (3/4), 263–268.

(699a) *Filaria martis* appears to occur in the American continent, in Europe and in North and South Africa. It has not been recorded from the Far East or from Australia. Caballero y C. describes the species again, having found it in *Taxidea taxus berlandieri*, noting in particular certain details of the oesophagus, male tail and the spicules and ova. He considers that several other species are really *F. martis*, in particular *F. carvalhoi* and *F. texensis*. P.A.C.

(699b) Caballero y C. describes again certain avian nematodes, recently collected in Mexico. *Contracaecum spiculigerum* was found in the proventriculus of *Phalacrocorax vigua*, *Physaloptera acuticauda* from *Circus cyaneus hudsonius*, *Hamatospiculum insignis* from *Speotyto cunicularia hypogaea* and *Aprocta anthicola* from *Buteo borealis borealis*. This last species showed certain differences from previous descriptions, particularly in the position of the vulva and in the relative size of the body. P.A.C.

700—Revista de la Sociedad Rural de Rosario.

*a. POMPONIO, H. C., 1948.—"La triquinosis y su control." 26 (311/312), 33–34.

701—Revista Sudamericana de Morfología. Buenos Aires.

a. WENGER, F., 1948.—"Necrosis eosinofílica y seudotubérculos de origen parasitario en el apéndice vermicular." 6 (1), 36–55. [English summary pp. 54–55.]

702—Revue Coloniale de Médecine et Chirurgie. Paris.

*a. MONTEL, L. R., 1948.—"Traitement des filarioses, de la lymphangite éléphantiasigène à rechutes et de l'éléphantiasis ; notes de thérapeutiques." 20 (161), 234–238.
*b. LABBÉ, LINHARD & BABLET, 1948.—"Nodules sous-cutanés multiples chez un indigène du Cameroun." 20 (161), 240.

703—Revue d'Élevage et de Médecine Vétérinaire des Pays Tropicaux.

a. TOUMANOFF, C., 1948.—"Quelques remarques à propos d'une note antérieure sur l'acanthocéphale, présumé nouveau, d'une panthère noire." 2, 119–120.
b. LÜTZ, 1948.—"Contribution à l'étude des maladies parasitaires internes des bovidés." 2, 165–174.
c. JORE D'ARCES, 1948.—"La lutte contre la strongylose gastro-intestinale en Algérie." 2, 217–223.

(703a) *Oncicola malayana*, described by Toumanoff as a new species from the Malayan panther *Felis melas* [for abstract see Helm. Abs., 16, No. 626b], may be found to be synonymous with *O. gigas* Mayer 1931 when a more detailed comparison of these two forms is possible. R.T.L.

(703b) In the Belgian Congo and particularly in the regions of the Lomami and of the upper Katanga, helminthiases of cattle attributable to Trichostrongylidae are much more important than hitherto realized. A disease formerly considered to be an intestinal form of gangrenous coryza is attributed principally to *Cooperia* spp., of which *Hippotragus equinus* appears to be a principal reservoir. The parasites identified were *C. punctata*, *C. pectinata*, *Ostertagia circumcincta*, *Haemonchus contortus* and, less commonly in cattle, sheep and game, *Oesophagostomum columbianum*, *O. radiatum*, *Trichostrongylus colubriformis*, *Bunostomum phlebotomum* and *Gaigeria* sp.(?) R.T.L.

(703c) In Algeria it is estimated that 95% of the sheep are infected with gastro-intestinal helminths. The annual losses in adult sheep are 10–15% and in lambs 30–35%. In certain regions (Chellala-Aflou) the death rate in adults reaches 40–50%, and in lambs

70–75%. An account is given of the steps being taken to introduce the use of phenothiazine throughout the area. Up to December 1945, 5,500 kg. were administered and 183,000 sheep were treated. R.T.L.

704—Revue de Médecine Vétérinaire. Lyon et Toulouse.

a. BORREL, A. J., 1948.—"Lésions hydatiques inattendues chez une poule." 99, 441–445.

(704a) Borrel describes a case of hydatid in a fowl. Cysts occurred in the liver and spleen where they had undergone calcareous degeneration. Other cysts occurred on the peritoneum and the gizzard while there was a pericardial scar which may have been connected with this infection. Scolices were found in some of the fluid. P.A.C.

705—Revue Médicale du Moyen-Orient.

a. ABI-RACHED, J., 1948.—"La filariose au Liban. A propos du premier cas autochtone et authentique." 5 (1), 81–83. [Discussion pp. 83–84.]
b. SÉFÉRIAN, V. & MAMO, A., 1948.—"Un cas de bilharziose vésico-rectale en Djézireh (Syrie)." 5 (3), 349–352.

706—Revue Suisse de Zoologie.

a. DUBOIS, G., 1948.—"Liste des strigéidés de Suisse." 55 (3), 447–476.

(706a) Dubois lists with brief commentaries the Strigeidae and Diplostomatidae which have been recorded from birds in Switzerland. Three varieties of *Apatemon gracilis* are recognized of which two are new, viz., *A. g. exilis* and *A. g. somateriae*. He considers *Cotylurus communis* of North America a variety of *C. platycephalus*. R.T.L.

707—Riforma Medica. Naples.

a. RUSSO, G., 1948.—"Sul trattamento delle cisti di echinococco del fegato con la pneumoparacentesi secondo Condorelli." 62 (9/10), 121–125.

708—Rivista di Parassitologia. Rome.

a. BIOCCA, E., AGOSTINUCCI, G. & BRONZINI, E., 1948.—"Ricerche parassitologiche preliminari sulle feci dei mammiferi del Giardino Zoologico di Roma." 9 (3), 169–175. [English & French summaries p. 174.]

(708a) The results of microscopical examination for helminth eggs of the faeces of various mammals in the Zoological Gardens in Rome are tabulated under the five illustrated egg types [but are not specifically determined]. R.T.L.

709—Rivista di Patologia e Clinica della Tubercolosi.

a. JOTTI, D., 1948.—"Su un caso di cisti da echinococco polmonare bilaterale." 21 (3), 162–171.

710—Röntgenpraxis.

a. STILLER, H., 1948.—"Röntgenologischer Nachweis von Askariden im Magen." 17 (3), 157–158.

711—Sang. Paris.

a. VAN DER SAR, A. & HARTZ, P. H., 1948.—"Quelques considérations sur l'étiologie parasitaire du syndrome 'éosinophilie tropicale'." 19 (2), 98–103.

712—Sborník Československé Akademie Zemědělské.

a. KRÁL, F., 1948.—"Sklerostomiasa koni (sclerostomiasis equorum)." 20 (1), 9–15. [English & Russian summaries pp. 14–15.]

(712a) In Czechoslovakia, particularly in plains and frequently flooded regions, foals and young horses suffer from chronic parasitic disseminated meningo-encephalitis.

They show ataxia, partial or complete paralysis, reduced sensibility and reflexes, sometimes associated with profuse diarrhoea. Enormous numbers of sclerostome eggs were always present in the faeces. The disease was progressive and always fatal. In all cases verminous aneurysms were present. In the central nervous system there were vascular and perivascular infiltrations, and abnormal distension and hyperaemia of blood vessels. Parts of the glia were hypertrophied and characterized by neurophagia. The ganglion cells were degenerated and most of them destroyed. Larvae and eggs were found in the distended pia-arachnoid zone and in the brain tissue. R.T.L.

713—Schweizerische Apotheker Zeitung.

a. MÜNZEL, K., 1948.—"Kommentar zum Sonderheft I der Rezeptsammlung Ärzte-Apotheker (R.A.A.), Anthelminthica (Würmer und Wurmmittel), herausgegeben von der Kommission für praktische Pharmazie (K.p.P.) des SAV." 86 (40), 685–693.

714—Schweizerische Zeitschrift für Pathologie und Bakteriologie.

a. FUST, B. & GURTNER, H., 1948.—"Aktive anaphylaxieversuche mit Askaridenextrakten." 11 (5), 463–471.

(714a) Fust & Gurtner have carried out active anaphylaxis experiments on guinea-pigs in an attempt to determine the biological activity of swine Ascaris extracts. Whole extract and protein fraction were anaphylactogenic, whilst carbohydrate and lipoid fractions were ineffective. The protein fraction was 1,380 times as effective as whole extract. Cross experiments showed active protein in the carbohydrate and lipoid fraction. The authors consider that whole Ascaris extract contains large amounts of non-anaphylactogenic nitrogen compounds in addition to traces of active protein. A.E.F.

715—Science. Shanghai.

a. CHEN, H. T., 1948.—"A preliminary note on heterophyid trematodes from China." [Abstract.] 30 (1), 17.

(715a) The following species are reported from China Proper and Hong Kong: *Heterophyopsis continua, Galactosomum sanaensis, Stictodora hainanensis, S. manilensis, S. sawakiensis, Centrocestus formosanus, C. armatus, Metagonimus yokogawai, Heterophyes heterophyes, Pygidiopsis genata, Stellantchasmus falcatus, Haplorchis yokogawai, H. pumilio, H. taichui, H. calderoni, H. sisoni* and six other *Haplorchis* spp. requiring confirmation. Most of these species are from southern China and are probably transmitted by feeding fresh-water fish to cats and dogs. In many cases their life-histories, and roles as human parasites are so far in doubt. P.M.B.

716—Sciences. Revue de l'Association Française pour l'Avancement des Sciences.

a. DOLLFUS, R. P., 1948.—"Comparaison entre la faune des parasites animaux de la morue et du hareng dans le domaine atlanto-arctique et mers tribulaires." [Abstract of paper presented at Congrès de Genève, XIe Section, Zoologie, July 12–16, 1948.] 75 (60), 484–485.

(716a) The helminths and Hirudinea which occur in the cod and the herring of the Atlantic-Arctic and adjoining seas are listed [but no generic or specific names are given]. R.T.L.

717—Semana Médica. Buenos Aires.

a. GUIXÁ, H. L., 1948.—"Equinococosis genital femenina." Año 55, 1 (2831), 646–653.
b. NIÑO, F. L., 1948.—"Nueva observación de *Dioctophyme renale* en perros de Buenos Aires." Año 55, 2 (2847), 255–257.
c. BACIGALUPO, J. & RIVERO, E., 1948.—"Esfínter vaginal, nuevo organo del *Echinococcus granulosus* (Batsch, 1786)." Año 55, 2 (2855), 695–696.

718—Sirürji (Bulletin de la Société Turque de Chirurgie).

*a. SALTUK, E., 1948.—[A case of hydatid cyst.] 1 (4), 196–197. [In Turkish.]

719—Skandinavisk Veterinär-Tidskrift.

a. NAERLAND, G., 1948.—" Den gastro-intestinale snylterplage hos sauen (fåret). I. Bemerkninger vedrørende snylterdiagnostikken og den anthelmintiske forsøksteknikk samt tallmessig oversikt over mage-tarmnematodene hos sau (og geit) under forskjellige aldre og beitetilhøve." 38 (10), 529–566. [English summary pp. 563–565.]

(719a) The nematode fauna of sheep of the same age in a flock varied considerably from individual to individual and even between twins. Animals kept during the summer months on mountain grazings were less heavily infected than those kept on the more heavily stocked reclaimed lands. Apparently healthy adults are lightly infected mainly with *Trichostrongylus* spp. and *Bunostomum*. Dietary and grazing deficiencies and chronic infections which lowered resistance invariably resulted in increased worm burden. In thriving lambs while temporarily housed and hand fed in October–December the ratio, total number of worms to eggs per gm. of faeces, which averaged about 4:1, increased during the winter months and reached 20:1 in April, although no reinfection had apparently taken place. R.T.L.

720—South African Medical Journal.

a. GITLIN, G., SCHAFFER, S. & GUNN, C. S., 1948.—" Intestinal helminth infection : incidence in patients attending the Springfield Health Centre, Durban." 22 (24), 788–793.

721—Staff Bulletin of the Easton Hospital.

*a. BATTLE, Jr., J. D. & FEINBERG, D. H., 1948.—" Neurologic complications of trichinosis." 1 (2), 7–11.

722—Stanford Medical Bulletin. Berkeley.

a. HANBERY, J. W., 1948.—" Cerebral schistosomiasis japonica. A case report." 6 (3), 382–387.

723—Süddeutsche Apotheker-Zeitung.

a. SCHENCK, G. O., 1948.—" Ueber Askaridol und seine Synthese." 88 (1), 3–6.
b. PREUSS, R., 1948.—" Ueber die Entwicklung einiger Eingeweidewürmer." 88 (7), 197–198.

724—Sugar Beet. Ogden, Utah.

*a. SCHOW, F., 1948.—" Nematode's nemesis." 7 (8), 18–19.

725—Suomen Eläinlääkärilehti. (Finsk Veterinärtidskrift.)

a. WESTERMARCK, H., 1948.—" Hiilitetrakloridin ja rikkihiilen käytöstä suolistoloisia vastaan sekä näiden lääkkeiden aiheuttamista myrkytyksistä." 54 (9), 329–333. [In Finnish : Swedish summary p. 333.]

(725a) Westermarck describes the use of carbon tetrachloride and carbon disulphide as anthelmintics, and their effects on the host tissues. E.M.S.

726—Surgery. St. Louis.

a. MILLER, J. M. & GINSBERG, M., 1948.—" Chronic inflammatory intestinal obstruction due to *Enterobius vermicularis*." 24 (1), 57–61.

727—Svensk Frötidning.

a. WALLER, E., 1948.—" Resultat från rödklöver-stamförsök i Skaraborgs län åren 1943–47, särskilt med hänsyn till klöverröta och klöverål." 17 (2), 16–19.
b. BINGEFORS, S., 1948.—" Sprides klövernematoden med frö ? " 17 (11), 118–121.

(727a) In field experiments in Västergötland (near Gothenburg) it has been shown that the main reason for the disappearance of red clover in second-year leys is attacks by

clover rot (*Sclerotinia trifoliorum*) and clover stem eelworm (*Anguillulina dipsaci*). In several field experiments, "Merkur" and "Resistenta" (resistant strains from south Sweden) have been compared with "Hassle Säby" (local strain from Västergötland). Of these strains "Hassle Säby" is the most hardy, but it is rather susceptible to clover parasites. When parasite attacks occur "Merkur" gives the best yield. S.B.

(727b) As examples of the spread of clover stem eelworm by clover seed, two field trials in Central Sweden are mentioned. In both these trials the same seed of each strain was used and the eelworm attacks were to a high degree concentrated to one strain. In all the plots of this strain the attacks were uniformly distributed. S.B.

728—Svensk Jordbruksforskning.

a. HOFLUND, S. & KOFFMAN, M., 1948.—"Bekämpandet av inälvsparasiterna hos får och nötkreatur." Year 1948, pp. 255–261.

(728a) A survey of the most important intestinal parasites in sheep, cattle and goats is given. Some rules for the control of these parasites are also given and the importance of preventive measures is pointed out. S.B.

729—Svensk Veterinärtidskrift.

a. BRANDT, O. & HÜLPHERS, G., 1948.—"Undersökningar rörande trikinlarvernas resistens mot kyla samt över deras utbredning i muskulaturen hos svin." 53 (12), 310–319. [English summary p. 318.]

(729a) In samples of 15 different muscle groups taken from trichinous pigs in Stockholm, Trichinella larvae occurred most frequently in the costal portion of the diaphragm whereas the diaphragm crurae contained only about half as many. Next in order of frequency of infection were the internal and external oblique muscles, the sternohyoid, gracilis, peroneus tertius, pterygoideus, tongue and laryngeal muscles, triceps, masseter, longissimus dorsi, and the oesophagus. No Trichinella were found in the myocardium. White mice were fed on infected pig carcasses frozen in halves for ten days at –9°C. and for 5–34 days at –20°C. Those fed on this material frozen for ten days or more did not become infected but those which received the pork kept at –9°C. for five days became trichinous. The carcasses of four infected pigs were frozen for 5—30 days at –18°C. in pieces of 2–3 kg. each in weight. Mice and guinea-pigs fed with pieces frozen for ten days or more remained free of infection, but those fed with pieces frozen for five days became trichinous. R.T.L.

730—Tabacco. Rome.

a. CURCIO, M., 1948.—"Su l'*Anguillula radicicola* (*Heterodera marioni*)." 52 (591), 290–296.

(730a) Curcio gives an account of the biology and morphology of *Heterodera marioni* and its effects on tobacco in Italy, where it is a serious pest particularly in the south and in Liguria. There are good photographs of the developing nematodes. He gives general recommendations for control by cultural methods and lists some of the published chemical treatments, which he does not consider wholly satisfactory. M.T.F.

731—Technical Bulletin. Virginia Agricultural Experiment Station.

a. THRELKELD, W. L., 1948.—"The life history and pathogenicity of *Chabertia ovina*." No. 111, 27 pp.

(731a) Threlkeld describes for the first time the complete larval development of *Chabertia ovina*. The eggs develop to the infective stage in seven days at room temperature when the larvae are characterized by 32 rectangular intestinal cells, and average 750μ in length. After ingestion the larvae penetrate the mucosa of the large intestine in 72–90 hours

and leave in 96 hours, causing profuse petechial haemorrhages. The formation of provisional and permanent buccal capsules is similar to that described for *Gaigeria pachyscelis* and *Oesophagostomum radiatum*. From the 25th day until the parasite reaches maturity, the host suffers severe diarrhoea with a bloody mucus discharge. The worms copulate on and after the 38th day and eggs first appear after 47 days. R.T.L.

732—Terre Marocaine.

*a. MONDON, 1948.—"La cénurose cérébrale (tournis)." 20, 273.

733—Therapie der Gegenwart.

*a. NIKOLOWSKI, W., 1948.—"Behandlungsversuche und Beobachtungen über Nebenerscheinungen bei Wurmkuren mit dem Präparat 'Phenothiazin'." Year 1948, No. 8, p. 167.

*b. TRUBE, H. J., 1948.—"Die Behandlung der Oxyuriasis mit Kristallviolett." Year 1948, No. 10, p. 213.

(733a) Phenothiazine, 2·5 gm. twice daily on two successive days (total dose 10 gm.), was administered to seven patients [whose ages are not given] with intercurrent worm infections and skin or venereal disease. Clinical and laboratory observation was continued for eight days. The action of the drug appeared to be vermifugal rather than vermicidal, especially in ascariasis. There were general but usually transitory disturbances following the treatment, especially of the haemopoietic system and of the liver, kidneys and pancreas. In a personal experiment Nikolowski observed increased urine diastase values even after two years. Phenothiazine should be used only when exact clinical supervision is possible. [Based on an abstract in *Med. Klin.*, 44 (19), 619.] E.M.S.

(733b) Trube treated 42 enterobiasis patients (children aged 3 to 14 years, and two adults) with crystal violet in the form of "Badil" dragees. Children were given one dragee daily for each two years of their age, i.e. four dragees for a child eight years old; adults received up to three dragees three times daily for seven days, with the usual hygienic measures. In most of the children Enterobius was found in the stool within 2–4 weeks after completion of the treatment and only a fraction were still worm-free eight weeks after treatment. In only a few cases could reinfection be proved, and most of the relapses were considered due to failure of the drug to reach the necessary concentration in the faecal mass or to reach parasites in the intestinal crypts. Nevertheless it is considered that "Badil" has a good effect in enterobiasis. [Based on an abstract in *Med. Klin.*, 44 (19), 619.] E.M.S.

734—Tidsskrift for den Norske Laegeforening.

a. OEDING, P., 1948.—"Et tillfelle av *Loa loa*." 68, 301–302.

(734a) Oeding reports a case of *Loa loa* in a Norwegian missionary who was infected in 1941 in the French Cameroons. Living microfilariae were shown in the blood during the day. S.B.

735—Tidsskrift for Planteavl.

a. BOVIEN, P., 1948.—"Plantesygdomme i Danmark 1945. 7. Skadedyr paa Land- og Havebrugsplanter." 51 (3), 409–428. [English summary p.436.]

b. BOVIEN, P., 1948.—"Plantesygdomme i Danmark 1945. 9. Havreaal-Forsøget i Dronningens Vaenge 1942–1945." 51 (3), 430–432. [English summary p. 436.]

c. BOVIEN, P., 1948.—"Plantesygdomme i Danmark 1946. 7. Skadedyr paa Land- og Havebrugsplanter." 52 (2), 267–281. [English summary pp. 290–292.]

(735a) During 1945 the following eelworm attacks on agricultural and horticultural crops in Denmark were reported. *Heterodera schachtii* [= *H. major*] was reported from several places and caused severe damage in oats. *Tylenchus* [= *Anguillulina*] *dipsaci* was reported on red clover, white clover and lucerne, and at one place on alsike clover where it did not attack red clover grown in the same field. *Heterodera rostochiensis* was reported

from a few new places. In addition, attacks on the following plants are mentioned in a special survey : *Aphelenchus* sp. on begonia, chrysanthemum, Doronicum, Sinningia and Gloxinia, and *Anguillulina dipsaci* on hydrangea and phlox. S.B.

(735b) In a field which was infected with oat eelworm in 1939 oats were grown in 1939, 1940 and 1942. In 1942 an experiment was started with different crops using perennial ryegrass, timothy, mangold, oats, wheat, rye and barley in this field, a part of which was also fallowed. In 1942 not only were oats very severely attacked by eelworms, but barley and wheat were also attacked. Rye was very slightly attacked and so was perennial ryegrass and timothy. Results in 1943, 1944 and 1945 show that oats after grass leys are very much more lightly attacked than after other crops. It is very dangerous to grow oats after barley because they are then very heavily attacked by eelworms, even more so than after oats. S.B.

(735c) During 1946 the following eelworm attacks on agricultural and horticultural crops in Denmark were reported. *Heterodera schachtii* [= *H. major*] caused severe damage in many oat fields and even barley suffered in some cases. In oats the symptoms were distinctly visible when the plants had two to three leaves only. *Tylenchus* [= *Anguillulina*] *dipsaci* occurred in many fields with red clover, white clover and lucerne. *Heterodera rostochiensis* was discovered in several new places but, as usual, only in gardens. In narcissus bulbs a very severe attack by *A. dipsaci* was found. S.B.

736—Tijdschrift voor Diergeneeskunde.

a. RINSES, J., 1948.—"*Paramphistomum cervi.*" **73** (2), 81.
b. GUNST, J. A. & MANEN, A. VAN, 1948.—"Onderzoek naar het voorkomen van paratyphus bacillen in de gal en tevens van de kiemhoudendheid van de gal bij normale bedrijfsslachtingen van runderen." **73** (3/4), 103–106. [English summary p. 106.]
c. SWIERSTRA, D., 1948.—"Onderzoek naar de werking van phenothiazine op *Capillaria longicollis* bij de kip." **73** (5), 149–153. [English summary p. 153.]
d. SWIERSTRA, D., 1948.—"Enkele mededelingen naar aanleiding van het in 1946 en 1947 ingezonden materiaal." **73** (21), 831–841.

(736a) In reply to an article by Schoon [for abstract see Helm. Abs., **16**, No. 339b], Rinses records that *Paramphistomum cervi* was encountered in great numbers in the rumen and reticulum of cattle in 1947, and also quite often in previous years. He points out that this agrees with what appears on p. 283, 3rd edit. (1921) of the textbook "Dierlijke Parasieten" by Sluiter, Swellengrebel & Ihle : they write "In Europe, also in the Netherlands, this parasite is frequently observed". P.L.leR.

(736b) Gunst & van Manen report on the bacterial examination of the gall for paratyphoid and other bacteria in 614 Dutch, 48 Irish and 64 Danish cattle that were slaughtered at abattoirs in the Netherlands. Bacteria were present in 39% of the Dutch, 47% of the Irish and 17% of the Danish stock. The high incidence in the Dutch and Irish cattle is attributed to the higher incidence of fascioliasis in them than in the Danish stock. Paratyphoid bacilli (*Salmonella dublin*) were encountered twice in Dutch stock. Most of the infections were due to *Bacterium coli.* A few animals harboured cocci and *Bacillus subtilis.* P.L.leR.

(736c) According to Swierstra helminthiasis is next to coccidiosis the most serious disease in fowls in Holland. *Capillaria* spp. are slightly less important than *Davainea proglottina. Raillietina* spp. are occasionally responsible for losses. *Capillaria longicollis* is more common than *C. columbae.* He reports that the daily administration of 1 gm. phenothiazine per kg. live-weight for five consecutive days and its repetition a fortnight later failed to reduce the numbers of *C. longicollis* in the treated birds to below those recovered from the untreated animals. This treatment freed the birds completely of *Heterakis gallinae.* P.L.leR.

(736d) Swierstra lists the parasites which were submitted for identification or were recovered from material submitted for examination at the Institute of Veterinary Parasitology and Parasitic Diseases, Utrecht, during 1946 and 1947. He tabulates the species of helminths which were recovered from the horse, ox, sheep, goat, pig, dog, cat, hare, rabbit, mouse, marten, chicken, pigeon, turkey, duck, swan and stork. He deals briefly with the incidence and importance of certain helminths parasitizing these animals. The death of a young horse is attributed to trichostrongylosis axei. The presence of *Oesophagostomum radiatum* complicates the diagnosis of trichostrongylosis in affected bovines : large numbers of larvae of *O. radiatum* in the wall of the small intestine produce typical symptoms of intestinal strongylosis and may prove fatal during the stabling period. Lungworm infection in young cattle has been very troublesome in certain years since 1930. He observes that the depressed state of agriculture seems to have had a marked influence on outbreaks of lungworm disease. Intestinal strongylosis in goats is attributed to the confinement of the animals to the same spot for prolonged periods. The presence of cloacal papillae in *Skrjabingylus nasicola* is recorded, and Swierstra expresses the opinion that the genus *Skrjabingylus* should be included in the family Thelaziidae as has been suggested before. The trematode *Chaunocephalus ferox* is very pathogenic for young storks. P.L.leR.

737—Transactions of the American Fisheries Society.

*a. DU PLESSIS, S. S., 1948.—" A gyrodactyloid parasite from the ureters of largemouth bass at the Jonkershoek Inland Fish Hatchery, South Africa." **75**, 105–109.

738—Transactions of the American Microscopical Society.

a. BASIR, M. A., 1948.—" The histological anatomy of the oesophagus of *Physaloptera varani* Parona, 1889." **67** (4), 352–358.
b. HELFER, J. R., 1948.—" Two new cestodes from salamanders." **67** (4), 359–364.

(738a) Basir has made a detailed study of the histology of the oesophagus of *Physaloptera varani*. This is divided into a short anterior muscular part and a long posterior glandular part. He has also studied in detail the oesophago-sympathetic nervous system and the oesophago-intestinal valve. R.T.L.

(738b) *Proteocephalus diana* n.sp. from *Batrachoceps attenuatus* and *Ensatina eschscholtzii* is differentiated by its uterine figure, number of eggs, length of neck and measurements. *P. enteraneidis* n.sp. from *Aneides lugubris* is differentiated from *P. diana* and other species of *Proteocephalus* by its definitive uterine figure. The salamander hosts were collected in California. No cestode from these hosts is recorded by A. C. Walton (1925) in his annotated list. R.T.L.

739—Transactions of the Ophthalmological Society of the United Kingdom.

a. MELANOWSKI, W. H., 1948.—" Cysticercosis of the eye." Year 1947, **67**, 229–239.

740—Transactions of the Royal Society of South Australia.

a. JOHNSTON, T. H. & EDMONDS, S. J., 1948.—" Australian Acanthocephala No. 7." **72** (1), 69–76.
b. JOHNSTON, T. H. & CLARK, H. G., 1948.—" Cestodes from Australian birds. 1. Pelicans." **72** (1), 77–82.

(740a) Three avian acanthocephalans are described. *Centrorhynchus horridus*, previously recorded from the Bismarck Archipelago, is reported from *Halcyon sanctus* in Queensland and New South Wales. *Polymorphus biziurae* n.sp. is an encysted larva in *Cherax destructor* and the adult was obtained from *Biziura lobata* on the Murray River. Encysted forms of *Gordiorhynchus hylae* occurred in the frogs *Limnodynastis dorsalis* and *Hyla aurea*. The adults were present in the intestine of *Podargus strigoides* at Orroroo in South Australia. R.T.L.

(740b) Three new species of *Hymenolepis* from *Pelecanus conspicillatus* in South Australia are described, namely, (i) *H. murrayensis* n.sp. which differs from *H. medici*, the only other *Hymenolepis* with 20–22 hooks, in that the latter has hooks 0·03 mm. long and a very large cirrus sac extending below the overlapping part of the preceding segment; (ii) *H. jaenschi* n.sp. which has 14 hooks; (iii) *H. ellisi* n.sp. which differs from *H. murrayensis* in its spiny cirrus sac with a ring of spines around its aperture. R.T.L.

741—Ugeskrift for Laeger.

a. THORBORG, N. B., TULINIUS, S. & ROTH, H., 1948.—"Trikinose paa Grønland." **110** (21), 595–602. [English summary p. 601.]
b. SKELLER, E., 1948.—"Trichinose i Kutdligssat." **110** (21), 602–607. [English summary p. 607.]

(741a) [This paper has also appeared in English in *Acta path. microbiol. scand.*, 1948, **25** (4), 778–794. For abstract see Helm. Abs., **17**, No. 142a.]

(741b) The occurrence of trichinosis at Kutdligssat in Greenland in the spring of 1947 is reported. Of a population of 930, 132 were affected. Eleven cases were fatal, and infection is thought to have been due to eating walrus meat. Exanthemas occurred in 80% of the patients and oedema of the eyelids in only two cases. The latter is thought to be due to the characteristic thick fat of the Eskimo face. Diagnosis was verified by serological examination and by the identification of Trichinella at post-mortem examination. P.M.B.

742—Urologia. Treviso.

a. RAVASINI, G., 1948.—"Eliminazione di ascaridi con le urine in un eccezionalissimo caso di fistola uretero-digiunale di probabile origine fetale." **15** (2), 155–158. [English summary pp. 84–85.]

743—Urologic and Cutaneous Review.

a. EL-SADR, A. R., 1948.—"Localized bilharziasis of the ureter." **52** (6), 334–339.
b. MAKAR, N., 1948.—"A case of bilharzial epithelioma of the groin." **52** (8), 481–483.

744—Växtskyddsnotiser.

a. WAHLIN, B., 1948.—"Skador på stråsäd och vallväxter i Östergötland våren 1948." Year 1948, No. 3, pp. 36–41.

(744a) In Östergötland stem eelworm caused only limited damage in red clover leys during 1947 to 1948. S.B.

745—Vestnik Oftalmologii.

a. VORONOVA, N. N., 1948.—[Case of subconjunctival cysticercosis.] **27** (1), 45–46. [In Russian.]

746—Veterinariya.

a. LEMISHKO, P. M., 1948.—[Determination of the developmental stage of unencapsulated trichinella larvae.] **25** (11), 36–37. [In Russian.]

(746a) Lemishko infected animals with Trichinella and examined the larvae in the tissues 14 to 21 days after infection. He found that the larvae after 16½ days and later, although still without capsules, were infective. He noticed that larvae on the 19th day after infection and later, if spirally coiled, showed a slight yellow tinge along the centre of the body and this could be taken as an indication that they had reached the infective stage. He also points out that it is important when examining tissue under the compressorium to look at the fluid round the section where unencapsulated larvae may be found. C.R.

747—Vida Médica. Rio de Janeiro.

a. RODRIGUES DA SILVA, J., 1948.—"Novos aspectos da terapêutica da esquistossomiase mansoni." **16** (4), 6–20.

(747a) The advisability of using rectal biopsies to check the results of anthelmintic treatment of cases of schistosomiasis mansoni is urged. R.T.L.

748—Vivarienfreund (Der). Berlin.

*a. DECKERT, K., 1948.—"Massensterben von *Lebistes reticulatus* (Peters), verursacht durch Gyrodactylusbefall." **7**, 88–91.

749—Vlugschrift. Plantenziektenkundige Dienst, Wageningen.

a. ANON., 1948.—"Aardappelmoeheid." No. 62, 4 pp.

(749a) *Heterodera rostochiensis*, the "most dangerous and stubborn pest of potato and tomato culture", has been known in Holland since 1941. This leaflet briefly describes the eelworm and its life-cycle, symptoms of attack, and methods of control. Direct chemical control is not yet possible, and control by rotation with non-susceptible crops is a long process. The spread of the eelworm by soil, wind and water is described: in Holland contaminated seed potatoes are a great potential source of dispersal. B.G.P.

750—Wiener Tierärztliche Monatsschrift.

a. SCHWARTZ, B., 1948.—"Gegen die Parasiten unserer Haustiere." 35 (10), 492–494.

(750a) [This is a translated extract of an article which appeared in *Yearb. U.S. Dep. Agric.*, 1943–47, pp. 71–80. For abstract see Helm. Abs., **16**, No. 350a.]

751—Wilhelm Roux Archiv für Entwicklungsmechanik der Organismen.

a. PFLUGFELDER, O., 1948.—"Experimentell-parasitologische Untersuchungen unter Berücksichtigung des Geschwulstproblems." 143 (3/4), 304–331.

(751a) Pflugfelder has studied the tissue reactions of hosts to helminth parasites. *Opisthioglyphe ranae* cercariae cause active proliferations in the epidermis of *Triturus*, but the same reactions were produced when extracts of cercariae and when various chemicals (chloroform, chloral hydrate, scarlet red) were injected. *Taenia taeniaeformis* larvae cause characteristic changes in the connective tissue of mouse liver often leading to hyperplasia. The tissue reactions of *Varanus salvator* to both larvae and adults of *Tanqua* sp. did not harm the parasite. In none of the above cases of obligatory parasitism can the tissue reaction of the host be looked upon as a defence mechanism. Experimental infection of *Rana temporaria* with *Rhabditis pellio* larvae, on the other hand, led to very marked host defence reactions characterized by capsule formation and proliferation of epithelioid cells resembling in some cases precancerous growths. A.E.F.

752—Zeitschrift für Hygiene und Infektionskrankheiten.

a. GURTNER, H., 1948.—"Toxische und antigene Eigenschaften von Ascaridenextrakten." 128 (3/4), 423–439.

(752a) Gurtner carried out toxicity tests on guinea-pigs and rabbits with a total extract and with protein, lipoid and carbohydrate fractions prepared from swine Ascaris. The peracute fatal poisoning produced by intravenous injection of total extract or protein fraction is very similar to histamine poisoning, especially in the guinea-pig, but is probably ascribable to toxic peptones, difficultly dialyzable albumoses, or a toxalbumin. By intracutaneous injection the protein fraction is remarkably low in toxicity for the rabbit, total extract and lipoid fraction being correspondingly more toxic. Skin tests of sensitized rabbits with doses of extract tolerated by untreated animals showed that total extract and protein fraction are highly antigenic, lipoid fraction only moderately antigenic and carbohydrate fraction without action. Complement-fixation reactions with serum of immunized rabbits indicated antigenic properties in all four extracts, as did electrophoretic analysis of immune sera. Skin tests on 12 human beings showed the specificity of the four Ascaris extracts, with the following order of effectiveness: protein fraction, total extract, lipoid fraction, carbohydrate fraction. E.M.S.

753—Zeitschrift für Naturforschung.

a. GÖNNERT, R. & ALTMANN, H. W., 1948.—"Zur Pathologie der Leber bei experimenteller Schistosomiasis mansoni der Maus." 3b (9/10), 345–348.

(753a) Gönnert & Altmann present a preliminary report on their experimental studies of the effect of schistosomiasis mansoni on the liver of mice. Liver damage is to some extent caused by worm toxins and by the Schistosoma pigment, but the most important role is played by the eggs which have invaded the liver via the blood stream and which become surrounded by pseudo-tubercles. Treatment with miracil led to almost complete healing in the course of a year and afforded opportunities for studying the stages of healing and the fate of worms killed by the drug. A more detailed account of the work is promised. A.E.F.

754—Zeitschrift für Parasitenkunde.

a. ERHARDT, A., 1948.—"Ein Fall von Darmperforation durch Spulwürmer (*Toxocara cati*) bei der Katze." 14 (1/2), 1–2.
b. VOGEL, H., 1948.—"Über eine Dauerzucht von *Oncomelania hupensis* und Infektionsversuche mit *Bilharzia japonica*." 14 (1/2), 70–91.

(754a) Post-mortem examination of a cat which died during anthelmintic experiments showed that numerous adult *Toxocara cati* had penetrated through the duodenum into the abdominal cavity causing ascites and eventual death. Erhardt has carried out post-mortems on well over 2,000 cats and had never before recorded such a case A.E.F.

(754b) Vogel describes in great detail how he maintained a strain of *Oncomelania hupensis* (a Chinese snail intermediary of *Schistosoma japonicum*) in the laboratory for ten years. The snails were bred in what are called "aquaterraria", i.e. metal-framed containers 70 cm. × 50 cm. × 50 cm. in height at back and 21·5 cm. at front with base and sides of glass (except the triangular side pieces and top half of back which were wire gauze) : these contained both water and a sloping grass-covered bank of sand and earth to simulate the natural habitat of the snail. Eggs were laid singly in spring, either under water or, more rarely, at the water's edge : the snails were fully grown 2½ months after hatching. The paper also deals with experimental infections of *Oncomelania* with *S. japonicum*. Snails kept at a temperature of from 26°C. to 28°C. began to shed cercariae from 39 to 81 days after exposure to large numbers of miracidia : cercariae continued to emerge over a period of many months (the maximum was twelve months). In seven series of experiments the infection rate varied between 23·6% and 80%. The greatest number of cercariae which emerged from a single snail in one night was 1,200. *Oncomelania* infected with a single miracidium shed as many cercariae as those exposed to many miracidia. A.E.F.

755—Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz.

a. FUCHS, W., 1948.—"Neuere ausländische Ergebnisse über Bodenentseuchung mit chemischen Mitteln." 55 (3/4), 93–97.

(755a) Fuchs briefly reviews the recent literature on the fumigation of soil with halogenated organic compounds, covering 41 references. So far as eelworms are concerned the fumigants dealt with are chloropicrin, methyl bromide, D-D mixture, ethylene dibromide and dichloride, penta- and tetrachlorethane, and calcium chloracetate. B.G.P.

756—Zentralblatt für Chirurgie.

a. FEIST, G. H., 1948.—"Chirurgische Komplikationen bei Askaridiasis." 73 (1), 72–83.
b. WEBER, H. O., 1948.—"Über Darmperforation als seltene Komplikation bei Askaridiasis." 73 (6), 604–607. [English, French and Russian summaries p. 607.]

757—Zoologicheski Zhurnal.

a. SHCHEGOLEV, G. G., 1948.—[Observations on manifold cocoon production by *Hirudo medicinalis*.] **27** (1), 13–16. [In Russian.]
b. DUBININ, V. B., 1948.—[Influence of the salinity of the Little Uzen River on the parasite fauna of its fishes.] **27** (4), 335–342. [In Russian.]
c. FEDYUSHIN, A. V., 1948.—[Geographical and zonal factors in the distribution of helminths.] **27** (6), 481–486. [In Russian.]

(757b) In a comparison of the parasite fauna of fishes from two places in the Little Uzen River, in one of which the water was fresh and in the other brackish, Dubinin studied the influence of salinity on the distribution of helminths. He gives the analysis of the water from both parts. He examined *Abramis abrama, Rutilus rutilus, Cyprinus carpio, Perca fluviatilis, Lucioperca lucioperca* and *Esox lucius*, Monogenetic trematodes found were *Dactylogyrus crucifer, D. zandti, D. falcatus, D. anchoratus, D. vastator, Ancyrocephalus paradoxus, Tetraonchus monenteron* and *Diplozoon paradoxum*, of which only *Diplozoon paradoxum* was found in fish in both parts of the river. Among the digenetic flukes *Bucephalus polymorphus* (metacercaria and adult), *Allocreadium isoporum, Sphaerostomum bramae, Asymphylodora tincae, Azygia lucii, Diplostomulum spathaceum* (metacercaria) and *Tetracotyle variegata* (cysts) were found, of which only the two last were found in the salty region. Among nematodes were found *Camallanus lacustris, Raphidascaris acus* and *Desmidocercella* sp. (*numidica*), 75% of which could live in salty water. C.R.

(757c) Fedyushin gives a comparison between the helminth fauna in *Perdix perdix* from Western Siberia and from the Kalininsk district. In Western Siberia 57·5% of partridges harboured ten helminth species, 93·4% being infected with tapeworms (five species) and 1·8% with nematodes (five species); whereas in the Kalininsk district 54% were infected with only four species, 20% with flukes (two species), 11·4% with tapeworms (one species) and 24·4% with nematodes (one species). The only parasite common to both regions was *Heterakis gallinae*. In another comparison 70·2% of *Lagopus lagopus major* in a steppe area were infected, but only 9·8% of *L. l. septentrionalis* in a forest-tundra (polar) area. The composition of the infection was also different: in the steppe area 90·9% were infected with cestodes and 9·1% with nematodes, but in forest-tundra 5·8% were infected with cestodes and 94·1% with nematodes. The species found in these two hosts were: *Raillietina* (*P.*) *urogalli, R.* (*S.*) *cesticillus, Rhabdometra tomica, Ascaridia compar, Cyrnea lyruri* and *Subulura* sp. The only species common to both regions was *R.* (*P.*) *urogalli*. C.R.

758—Zooprofilassi. Rome.

a. FONTANELLI, E., 1948.—"Parassitosi nei suini: ascaridiosi intestinale." **3** (6), 155–158.
b. TASSI, L., 1948.—"L'esame trichinoscopico e la realtà d'oggi." **3** (6), 159–160.
c. SGAMBATI, A., 1948.—"La tutela dell'uomo dalla infestione da Trichina." **3** (10), 11–12.
d. SAVI, P., 1948.—"Teniasi degli ovini." **3** (11), 301–305.
e. CACCAVELLA, A., 1948.—"Sui danni recati ad alcuni bovini dell'Africa Italiana dagli irudinei del genere *Hararbdella*." **3** (12), 344–348.

(758d) Rapid improvement in condition followed the administration of 0·5 gm. of 10–12% pyrethrum extract in 10–15 c.c. of castor oil, to lambs which were heavily infected with *Moniezia expansa*. The treatment was repeated after seven days. Similar results were obtained by using 1–1·5 gm. of chrysanthemum extract in 20–25 c.c. of castor oil in a flock infected with *Taenia* sp. Savi considers that although pyrethrum is not always as effective as other anthelmintics, its non-toxic qualities are noteworthy. P.M.B.

(758e) Large numbers of leeches of the genus *Hararbdella* were found in 1940 attached to the mucosa of the mouth and throat of six cattle in a valley with thick vegetation and muddy pools near Harar in Abyssinia. In addition to anaemia and ulceration of the mouth and throat, the cattle showed advanced signs of malnutrition as they were unable to eat owing to the heavy infestation. After the leeches were removed by hand a mixture of vinegar and salt was applied to the affected parts. Caccavella believes that these and

other leeches have a toxic action on the host. [The author summarizes the morphological characters of *Hararbdella* n.g., *Hararbdella caccavellai* n.sp. and *H. trigonostoma* n.sp. all of which were so named and fully described by Sciacchitano in "Le attuali conoscenze sugli Irudinei dell'Africa Italiana" which appeared in *Riv. Biol. colon.*, 1941, 4 (3), 161–170.] P.M.B.

759—Zootecnia e Veterinaria. Milan.

*a. MITROVIC, M., 1948.—[Two cases of fatal poisoning in horses treated with therapeutic doses of phenothiazine.] 3, 157–160. [In Italian.]

NON-PERIODICAL LITERATURE

760—*ANON., 1948.—"Providing for the protection of potato and tomato production from the golden nematode." Washington, 3 pp. (U.S. House of Representatives. Report No. 2187. 80th Congress, 2nd Session).

761—ASHLEY, W. F., 1948.—"Surgical Echinococcus disease." Thesis, University of Minnesota, 27 pp.

762—*BENBROOK, E. A., 1948.—"List of parasites of domesticated animals in North America." Minneapolis: Burgess Publishing Co., 2nd edit., 53 pp.

763—BOTTENBERG, H., 1948.—"Die Blutegelbehandlung. Ein vielseitiges Verfahren der biologischen Medizin." Stuttgart: Hippokrates-Verlag Marquardt & Cie., 2nd edit., 223 pp., DM. 15.

764—BRINKMANN, Jr., A., 1948.—"Some new and remarkable leeches from the Antarctic seas." Scientific Results of the Norwegian Antarctic Expeditions, 1927–28. Oslo, No. 29, 17 pp.

Trulliobdella capitis n.g., n.sp. is described from *Parachaenichthys georgianus* and *Chaenocephalus bouvetensis*. It is found principally on the dorsal part of the host's head especially between the eyes. The body is dorso-ventrally flattened, consisting of a short and slender preclitellar part and a postclitellar part which is twice as long and broad. There are no fin-like lateral membranes or branchiae. There are four small protruberances on the oral sucker which appear to be characteristic of this species. Four pairs of eyes are present on the oral sucker and five pairs dorso-laterally on the anterior first three annuli. The posterior sucker is also provided with eye spots, the maximum number being seven. The mouth is subterminal, the stomach lacks posteriorly directed gastric caeca and the intestine has four pairs of lateral extended pouches. A fold organ is inserted between the intestine and rectum. Vascular lacunae are present outside the dermal musculature. *Cryobdellina bacilliformis* n.g., n.sp. was found in the oral cavity of *P. georgianus*. The body of this small leech is fusiform, little flattened, smooth and without pulsating vesicles. There are five pairs of eyes on the oral sucker, four pairs dorso-laterally on the anterior first three annuli, and dorsal marginal eyes are present on the posterior sucker. The mouth is central. The intestine has four pairs of lateral pouches and the posteriorly directed gastric caeca are partly fused. There are four pairs of testes. P.M.B.

765—CHEATUM, F. L., 1948.—"A contribution to the life-history of the deer lungworm *Leptostrongylus alpenae* (Nematoda: Metastrongylidae) with observations on its incidence and biology." Dissertation, University of Michigan, 83 pp.

In experimental infections the infective stage of *Leptostrongylus alpenae* was reached in 28–35 days in *Succinea retusa*, *Polygyra albolabris* and *Discus cronkhitei*. When infective molluscs were fed to deer, the prepatent period lasted from 67–108 days but no adults were recovered. The larvae caused emboli in the lungs and when infective larvae were administered repeatedly, nodular lesions with intense eosinophil infiltrations were produced. In deer from the Adirondack region of Michigan the incidence of *L. alpenae* was 73% and *Dictyocaulus* sp. also occurred. Natural infection of the deer was highest in the early spring and is correlated with the autumn and winter feeding habits of the deer. R.T.L.

766—CHRISTIE, J. R., 1948.—" Soil fumigation for control of nematodes and other soil-inhabiting organisms." U.S. Bureau of Plant Industry, 21 pp.

In Christie's revised edition of his paper on the practical aspects of soil fumigation [see Helm. Abs., **16**, No. 131a], the revision concerns the section on p. 20, "Applying the Fumigant". Against root-knot, 20–25 gal. per acre of either 10% (v./v.) ethylene dibromide or D-D mixture is recommended, and against cyst-forming eelworms for one-year control, 25 gal. per acre. In both cases 40–50 gal. per acre are necessary in order to approach eradication. B.G.P.

767—DÉVÉ, F., 1948.—" L'échinococcose osseuse." Montevideo : A. Monteverde & Cia, 236 pp., 700 fr.

768—DÉVÉ, F., 1948.—" L'echinococcose primitive. (Maladie hydatique)." Paris : Masson et Cie, 362 pp., 1,000 fr.

769—*DEWES, P., 1948.—" Untersuchungen über die Taxien der filariformen Strongylidenlarven des Pferdes." Dissertation, Hanover.

770—*DRERUP, K., 1948.—" Mittel zur Bekämpfung von Bandwürmern beim Hunde." Dissertation, Hanover.

771—DUDICH, E., "AZ ÁLLATOK GYÜJTÉSE", [ZOOLOGICAL COLLECTING], Budapest.

a. SOÓS, A., 1948.—" Szabadon élö fonálférgek.—Nematoda." pp. 79–87. [In Hungarian.]
b. KENDER, J., 1948.—" Hurférgek.—Nematomorpha." pp. 88–89. [In Hungarian.]
c. MÖDLINGER, G., 1948.—" Élösködö fonálférgek, szivóférgek és galandférgek. Nematoda parasitica, Trematoda, Cestoda." pp. 90–97. [In Hungarian.]
d. KENDER, J., 1948.—" Piócák.—Hirudinoidea." pp. 123–125. [In Hungarian.]

772—*GIETZELT, G., 1948.—" Über die Lungenwürmerkrankung bei Rind und Schaf und ihre Behandlung." Dissertation, Hanover.

773—GRADWOHL, R. B. H. & KOURÍ, P., 1948.—" Clinical laboratory methods and diagnosis. Vol. III. Parasitology and tropical medicine." St. Louis : The C. V. Mosby Co. (London : Henry Kimpton), 4th edit., viii + 864 pp.

774—HARANT, H. & DUC, N., 1948.—" Pathologie exotique." Paris : Librairie Maloine, xviii + 274 pp., 7/6d.

775—HASLE NIELSEN, K., 1948.—" Graesmarksbogen." Copenhagen : Landbrugsforlaget, pp. 92–95.

Hasle Nielsen gives some results from Danish investigations on stem eelworm in red clover, white clover and lucerne. All these species seem to have specialized strains of eelworms. Some strains of wild English white clover are not so susceptible to attacks of the white clover eelworm and are able to survive the attacks. S.B.

776—*HEINZE, W., 1948.—" Über den Befallsgrad mit Magen-, Darm-Parasiten beim gelben Frankenvieh im Main-Dreieck nördlich Würzburg und Versuche zur Bekämpfung der Parasiten mit Phenothiazin." Dissertation, Hanover.

777—JÍROVEC, O., 1948.—" Parasitologie pro zvěrolékaře." Praze : 434 pp.

778—*KIND, H., 1948.—" Über die Möglichkeiten einer Trichinose-Infektion beim Sumpfbiber." Dissertation, Hanover.

779—*KLAGES, W., 1948.—" Untersuchungen über die Wirkung von Equivermon und Equivermon mit Istizin und Phenothiazin auf die Askariden und Strongyliden beim Pferd." Dissertation, Hanover.

780—LAVERDE, A. G., 1948.—" Aspectos anatomo-patológicos de enfermedades parasitarias." Thesis, Bogotá, 55 pp.

The helminth section of this summary of the pathological reactions to parasitic infections contains photomicrographs and brief notes of three cases of infection : (i) of the appendix by *Trichuris trichiura* and *Enterobius vermicularis*, (ii) of the lung by an unidentified adult filariid worm in a negro from Puerto Salgar and (iii) of subcutaneous tissue by *Cysticercus cellulosae*. R.T.L.

781—LESBOUYRIES, G., 1948.—" Troubles nerveux et parasitisme intestinal de la poule." Report of World's Poultry Congress (8th), Copenhagen, August 20–27, 1948. Vol. I, pp. 684–687. [English & Danish summaries p. 687.]

In France, Marek's paralysis in poultry and other disturbances of the nervous system are almost always due to an enteritis often associated with *Davainea proglottina* or capillariasis. The addition of calcium to the diet is far more effective than anthelmintic treatment. R.T.L.

782—LÓPEZ-NEYRA, C. R., 1948.—" Helmintos de los vertebrados ibéricos." Granada : Instituto Nacional de Parasitología de Granada, 3 vols., 1212 pp.

In these three magnificent volumes, López-Neyra gives a systematic review of the helminth parasites of vertebrates in the Iberian Peninsula. Vol. I covers Platyhelmia ; Vol. II deals with Nematoda and Acanthocephala ; Vol. III provides 174 plates with many original figures, a bibliography of 1,027 titles, a host list, an alphabetical list of genera and synonyms, and a list of specific names and synonyms. R.T.L.

783—*MÄHLMANN, H. W., 1948.—" Chlorbestimmung im Gesamtblut und Blutserum wurmkranker Pferde." Dissertation, Hanover.

784—*MAROTEL, G., 1948.—" Parasitologie vétérinaire : parasites et maladies parasitaires des animaux." Paris : J. B. Baillière et fils, 2nd edit., 652 pp., 1,250 fr.

785—*METIANU, T. & POP, O., 1948.—" Parafilariosa emoragica a bovideelor din România." Bucharest, 1948.

786—NILSSON-LEISSNER, G., 1948.—" Natural selection and the breeding of cross-fertilizing plants." In : "Svalöf 1886–1946. History and present problems", edited by Å. Åkerman, O. Tedin & K. Fröier. Lund : Carl Bloms Boktryckeri A.-B., pp. 198–210.

Nilsson-Leissner shows that natural selection has a very great influence on red clover, not only relating to winter hardiness but also to resistance to parasites such as Sclerotinia and stem eelworm. As an example he gives Merkur, a Swedish red clover strain produced by repeated mass selections from the old local strain, Spannarp, in fields damaged by stem eelworm and Sclerotinia. By quoting an experiment where Svalöf pure-bred late red clover had been grown for seed in different parts of Sweden, he also shows how easily a strain may lose its resistance if it is not constantly subjected to attacks by these parasites. S.B.

787—*POUTIERS, R., 1948.—" Parasitologie agricole." Paris : Flammarion, 296 pp.

788—REPORT. NAVAL MEDICAL RESEARCH INSTITUTE, Bethesda, Maryland.

a. LEVINE, M. D., GARZOLI, R. F., KUNTZ, R. E. & KILLOUGH, J. H., 1948.—" On the demonstration of hyaluronidase in cercariae of *Schistosoma mansoni*." Project X-535, Rept. No. 14, 4 pp.
b. KUNTZ, R. E., 1948.—" Abnormalities in development of helminth parasites with a description of several anomalies in cercariae of digenetic trematodes." Project X-535, Rept. No. 15, 8 pp.
c. McNAUGHTON, R. A., 1948.—" Metabolic changes of male and female *Schistosoma mansoni* during growth." Project X-535, Rept. No. 16, 6 pp.
d. McNAUGHTON, R. A., 1948.—" A rapid method for the determination of the effect of drugs on the metabolism of *Schistosoma mansoni* using Warburg technic." Project X-535, Rept. No. 17, 8 pp.
e. LEVINE, M. D. & KUNTZ, R. E., 1948.—" The effect of sodium salicylate on experimental *Schistosoma mansoni* infections." Project X-535, Rept. No. 18, 4 pp.
f. KILLOUGH, J. H., 1948.—" Three new antimonial compounds active against experimental infections with *Schistosoma mansoni*." Project X-535, Rept. No. 19, 5 pp.
g. STIREWALT, M. A., EVANS, A. S. & KUNTZ, R. E., 1948.—" The susceptibility of albino rats to *Schistosoma mansoni*." Project X-535, Rept. No. 20, 11 pp.

(788a) [This paper has also appeared in *J. Parasit.*, 1948, **34** (2), 158–161. For abstract see Helm. Abs., **17**, No. 97m.]

(788b) [This paper was published, but without the list of references, in *Proc. helminth. Soc. Wash.*, 1948, 15 (2), 73–77. For abstract see Helm. Abs., 17, No. 219c.]

(788c) McNaughton reports on the rates of oxygen consumption and anaerobic glycolysis of males and females of *Schistosoma mansoni*, obtained from mice during the growth period of six to twelve weeks following infection. The rates of oxygen consumption and anaerobic glycolysis per unit dry weight of tissue decreased as the worms increased in size. Decreases were greater in the females than in the males. He compares his findings with the aerobic and anaerobic metabolic values recorded for certain normal tissues (kidney, liver, spleen, pancreas, embryo and retina) in the rat and for tumours (nasal polyp, basal carcinoma, rat sarcoma, dog sarcoma and round-cell sarcoma). Anaerobic glycolysis of both male and female was as high or usually higher than that of the tumours. Oxygen consumption in the young females was several times higher than that of most normal or tumour tissues. P.L.leR.

(788d) McNaughton describes a rapid method for the determination of the action of drugs on the oxygen consumption and glycolysis of *Schistosoma mansoni*. He shows that fouadin decreases oxygen consumption at lower concentrations than it does anaerobic glycolysis. Amorphous penicillin possesses a factor which has a marked inhibitory effect on both oxygen consumption and anaerobic glycolysis. Serum protects the parasites against this factor, and *in vivo* much higher concentrations of amorphous penicillin will be needed than are effective in Ringer's solution. P.L.leR.

(788e) The production of hyaluronidase by cercariae of *Schistosoma mansoni* cultured at room temperature for 24 hours, induced Levine & Kuntz to investigate the inhibition of hyaluronidase by sodium salicylate, as a possible prophylactic against schistosome infection. The oral, intravenous, subcutaneous or intraperitoneal administration of sodium salicylate in doses of one half the $M.L.D._{50}$ to mice prior to exposure to given numbers of cercariae, failed to influence the incidence of infection in these animals. P.L.leR.

(788f) Killough reports on the therapeutic efficiency of three new antimonials, *p*-(sodium stibonate) ethyl benzoate (NMRI-889), a sodium salt of *p*-amidobenzene stibonic acid (NMRI-896), and a sodium salt of *p*-sulphamidobenzene stibonic acid (NMRI-501), on *Schistosoma mansoni* in mice which had been infected for six weeks. These drugs were administered intraperitoneally either once daily for two weeks, twice daily for two weeks or twice daily for one week. NMRI-501 administered once daily for a fortnight compared favourably with fouadin and was therapeutically superior to the other two and to tartar emetic and anthiomaline. Given twice daily for a fortnight NMRI-501 cured the mice, proving superior to fouadin and tartar emetic and equal to anthiomaline. Its efficiency was markedly reduced when it was administered twice daily for only one week. In cases of effective treatment, migration of the schistosomes from the mesenteric veins to the liver was observed. P.L.leR.

(788g) Stirewalt, Evans & Kuntz state that the white rat is an unsuitable definitive host for the maintenance of *Schistosoma mansoni* in the laboratory, or for the recovery of numbers of well developed adult worms from the mesenteric veins and of viable eggs from the faeces. The white rat is considered a favourable host for studying natural host resistance under experimentally changed conditions. Variations in the worm load encountered in different rats may not be the result of variations in host resistance alone, but may be due in part to variations in cercarial infectivity. P.L.leR.

789—RINGUELET, R., 1948.—" Zooparasitos de intéres veterinario.—Su distribución en la Argentina según comprobaciones de la dirección de patologia animal (1935–1945)." Buenos Aires : Ministerio de Agricultura de la Nación, 54 pp.

790—SACQUET, E., 1948.—"Les schistosomoses des animaux domestiques." Thesis, Alfort, 119 pp.

In this thesis Sacquet brings together a considerable number of known facts concerning those Schistosomatidae which are of interest from the standpoint of animal pathology. He points out that it is difficult from a study of the morphology of the adults and of the eggs alone to define precisely the limits of some species. *Schistosoma rodhaini* and *S. bomfordi* have not been found since they were first reported. Sacquet believes that *S. curassoni* is probably the same as *S. bovis*, that *S. margebrowei* is perhaps the same as *S. faradjei* and that *S. suis* is doubtless identical with *S. incognitum* which is probably a parasite of pigs and may be of dogs, but not of man. *S. mattheei* is thought to be a variety of *S. bovis*. R.T.L.

791—SKRYABIN, K. I., 1948.—[Trematodes of animals and man. Principles of trematodology. Volume II.] Moscow & Leningrad: Izdatelstvo Akademii Nauk SSSR, 600 pp., 36 roubles. [In Russian.]

This second volume of the monograph on Trematoda produced by Skryabin and his co-workers deals with the Fascioloidea and gives a description of subfamilies, tribes, genera and species belonging to Fasciolidae, Campulidae, Brachylaemidae, Rhopaliadae, Rhytidodidae, and Sphaerostomatidae. Skarbilovich is responsible for the Lecithodendriidae. This volume deals with seven families, 13 subfamilies, 69 genera and 248 species and is illustrated by 293 figures. At the end of each chapter there is an extensive list of references. C.R.

792—SKRYABIN, K. I. & SHIKHOBALOVA, N. P., 1948.—[Filariae of animals and man, for veterinarians, medical men and biologists.] Moscow: Ogiz-Selkhozgig, 608 pp., 17 roubles, 45 k. [In Russian.]

In the general part of this monograph on the Filariata the authors deal with the anatomy, biology, importance in human and veterinary medicine and also give a short historical outline of the suborder. In the systematic part descriptions are given of the families: (i) Filariidae, subfamilies Filariinae, Diplotriaeninae; (ii) Aproctidae, subfamilies Aproctinae, Tetracheilonematinae; (iii) Setariidae, subfamilies Setariinae, Dipetalonematinae, Stephanofilariinae, and of 85 genera with 351 species. There are 256 figures. Two new genera are created both in the subfamily Filariinae, viz., (i) *Acanthospiculum* n.g. for *Filaria flexuosa* Webb, 1856 and *Onchocerca cervipedis* Wehr & Dickmans, 1935 and (ii) *Cystofilaria* n.g. for *Filaria* sp. Kostitch & Mlinac, 1938 which occurs in large nodules under the oesophageal musculature of dogs and was renamed *Cystofilaria balkanica* by Skryabin & Shikhobalova, 1947. The monograph is provided with many keys and tables and concludes with a host list of the known filariae, an index to species, subgenera, genera, subfamilies, families, and their synonyms, and 636 references. C.R.

793—TAYLOR, E. L., [1948.]—"Parasites and grassland." In: Report of Proceedings, Conference on Grassland and Animal Health, London, October 28 and 29, 1948. N.V.M.A. Publication No. 17, pp. 56–59.

Taylor points out that the most powerful factor in the avoidance of helminthic diseases among grazing animals on enclosed pasture is the specific resistance they acquire in early life. There is still much to be learnt of the association between the nutritional peculiarities of pasture herbage and the development and maintenance of helminth resistance. R.T.L.

794—*TEICHERT, G., 1948.—"Pharmakologische Untersuchungen mit Terpenabkömmlingen an der Askaridiasis der Katze und an der *Passalurus*-Infektion des Kaninchens." Dissertation, Heidelberg.

795—TELLES, W., 1948.—" Síndrome pulmonar eosinofílica." Thesis, National Faculty of Medicine, Rio de Janeiro, 79 pp.

796—*THEMME, H., 1948.—" Experimentelle Untersuchungen über die Möglichkeit der Übertragung der Askaridiasis durch Papiergeld." Freiburg : Inaugural-Dissertation.

797—*VANNI, V., 1948.—" Parassitosi intestinali." Florence : Vallecchi Editore. 2nd edit., 210 pp., 800 lire.

INDEXES

NOTE

In all indexes the reference is to the serial numbers and not to the pages. Numbers in **bold** type indicate abstracts, and numbers in Roman type refer to title-only entries.

In the Author Index there are no cross-references to show joint-authorship, but authors of joint papers are listed individually. Thus, a paper by " Brown, B., Jones, A. & Smith, J." would have three separate entries, " Brown, B.", " Jones, A.", and " Smith, J.".

In the Index of Subjects, alphabetization is under the first word (e.g. "*Acer* sp." before "*Acerina* sp."). Under the generic name of a helminth the following order is observed : papers on the genus as such ; papers on undefined species ; papers on new and defined species, e.g.

Capillaria
— spp.
— *aerophila*
— *amarali* n.sp.

In cross-entries under names of hosts, the specific names of new species of helminths are omitted. *Anthelmintics* are listed under that word, under the name of the parasite or disease, and under the name of the host. *Nematicides* for plant eelworms are listed separately under that word, and under the name of the parasite.

INDEX OF AUTHORS

(The reference is to the serial number : numbers in bold type indicate abstracts.)

INDEX OF SUBJECTS

(The reference is to the serial number : numbers in bold type indicate abstracts.)

CORRIGENDA

Serial No.	
31b	(Title) *For* "RIESSENMAN" *read* "RIESENMAN"
53a	(Abstract) Line 5, for "*S. spindale*" read "*S. japonicum*"
375g	(Abstract) Line 5, for "*T. skjabini*" read "*T. skrjabini*"

MADE AND PRINTED IN ENGLAND